



RSA INSTRUMENTS PVT. LTD.

The Products That You Need In Process Industries



TRUE PERFORMANCE IN LEVEL & FLOW MEASURING INSTRUMENTS



APPLICATION

CHEMICAL PROCESS INDUSTRIES

BULK DRUG PHARMACEUTICALS

PHARMACEUTICALS

PETROCHEMICALS

AGROCHEMICALS

PESTICIDES INDUSTRIES

INSECTICIDES

ORGANICS INDUSTRIES

INORGANICS

DYES AND INTERMEDIATE

SUGAR INDUSTRIES

POWER PLANT

OIL INDUSTRIES

CEMENT INDUSTRIES

ENGINEERING EQUIPMENT MFG.

COLD STORAGE

PRODUCT RANGE

TANK LEVEL INDICATOR

- a) Tubular Type (RSA 1008)
- b) Side Mounted Magnetic (RSA 1080)
- c) Magnetic Top Mounted Level Indicator (RSA 1170)
- d) Float & Board Type (RSA 1260)
- e) Float & Board Magnetic
- f) Reflex Type (RSA 1350)
- g) Transperent Type
- h) Side Mounted Magnetic Level Switch (RSA 2007)
- i) Side Mounted Magnetic Level Switch (RSA 2070)
- J) Cable Float Switch
- k) LEVEL TRANSMITTER

ROTAMETER

- a) Glass Tube rotameter (RSA 3006)
- b) Acrylic Body Rotameter (RSA 3060)
- c) Metal Tube Rotameter (RSA 3140)
- d) Purge Rotameter (RSA 3240)
- e) By pass Rotameter (RSA 3330)

SIGHT FLOW INDICATOR

- a) Full View Type (Check nut type / Allen Bolt type (RSA 4005)
- b) Double Window Type (Drip Tube / Rotator / Flapper) (RSA 4500)
- c) Rubber Lined Sight Glasses
- d) FEPLined Double Window Flow Indicator

MANOMETER]

- a) Double Limeb `U`Tube Manometer (RSA 5004)
- b) Singal Limbe Manometer (RSA 5040)
- c) Acrylic Body Manometer (RSA 5130)

TOUGHNED GLASSES

- a) Round/ Rectangular / Reflex / Transparent / Toughened Glass and Boiler Gauge Glass tube.

WE SATISFIED YOUR EXPECTATION

TRIED - TESTED - TRUSTED

RSA INSTRUMENTS PVT. LTD.

SIDE MOUNTED TUBULAR TANK LEVEL INDICATOR (RSA 1008)

Side mounted heavy duty tank level indicator are suitable for storage tanks, Batch tank, Day tank, Receiver tank. It is simple & reliable devices for direct reading in Atmospheric or pressurised tank application.

FEATURES:-

Glass tube is fully protected by box section made out of M.S. Channel 2mm thick light weight & Economical design. Heavy wall borosilicate glass tube 19mm OD available in single length 3mtr. Extended length by coupling through a coupler.

Material of construction available

Body /Space	: M.S./S.S./M.S.with FEP / PP Lined.
Tube	: Borosilicate 19mm/25mmOD on request.
Packing	: Pure teflon & Special application - Silicon.
Flange Mounting	: M.S. / S.S. / PP / SLIP ON
Scale	: Machined Engraved Alluminium / Acrylic / S.S.
Temp.	: 0-120°C
Pressure	: Full Vacuum / 6 kg cm ² / max



SIDE MOUNTED MAGNETIC LEVEL INDICATOR (RSA 1080)

Side mounted magnetic level indicator works simple magnetic principle used to get unique, most reliable & absolutely safe level indicator. It is mainly under used for most dangerous liquids even with under high pressure & high temperature.

The unit consist of all SS 316 Parts. With inside of SS main Chamber pipe, The SS magnetic float which moves up & down Accordingly follows liquid Variation in the tank.

The Float Magnet is Operated by Magnetically coupled to the Bicolour red & white outside chamber, which is mounted on front side of the main S.S. Pipe

material of construction available

Main Chamber pipe	: S.S./ P.P.
Float	: S.S. - 316 / P.P.
Outside casing pipe	: Bicolour red & white magnetic Roller
Scale	: Alluminium black Engraved / S.S. / Acrylic
Flange	: S.S. / P.P.
Drain	: ½" BSP drain valve provided on request.
Pressure	: 20kg/cm ² or 50kg /cm ²
Temp	: 130 c
Available Length	: Maximum 3.5 meter



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TOP MOUNTED MAGNETIC LEVEL INDICATOR (RSA 1170)

LEVEL

Suitable for continuous level indication of horizontal tank and mainly underground tank containing very hazardous and corrosive liquid in nature.

It is covered in two units, one unit fixed on mounting flange with guided cage assembly & float is connected to the S.S. pipe having imported magnet assembly.

Second unit fixed on mounting flange. The magnet assembly moves up & down in the main S.S. pipe chamber. The float magnet is operated by magnetically coupled to the follower red magnet outside chamber which is mounted on front side of the main S.S. pipe.

Material of construction available

Main Chamber pipe	: S.S. / P.P.
Float	: S.S. 316 / P.P.
Outside casing pipe	: Glass tube inside red follower.
Scale	: Alluminium /S.S./Acrylic.
Flange	: S.S./M.S.
Pressure	: 25Kg /cm ²
Temp	: 225°C.
Available Length	: Maximum 3.5 meter.



FLOAT & BOARD TYPE LEVEL INDICATOR (RSA 1260)

FEATURES:

It is a simple, accurate, maintenance free & reliable float operated technique adopted for tank gauging in large Non pressurized storage tank where to get a level within 1" or 2" of liquid level is satisfactory and provides the additional convenience of being able to read out at 100 or 200 ft. away from the tank.



Material of construction available.

Float moves up & down during a rise in liquid level and vice-versa. So that the pointer is at bottom position during full tanks and the top position during empty condition. In case of magnetically coupled reading, the float is connected to a magnetic counter weight, moving within a sealed S.S. chamber, the follower magnetic capsule inside a transparent glass tube to give level indication. This concept is adopted for volatile liquids with relatively high vapour pressure.

Measuring range : 1-30 mtrs. (Direct) and 0 - 4.5 mtrs. (Magnetic).

Float : S.S. -316 / FRP Lined / P.P./ M.S.

Wire : S.S. -304 / P.P./Teflon.

Pointer / Indicator : M.S. Epoxy Painted Red Colour / S.S. -316 with 6 Nos. P.P. Rollers.

Scale : 6" wide M.S. or Alluminium Powder Coated.

Housing & Pully : Alluminium / S.S. -316 / P.P.

Custom Made Quality Equipment

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REFLEX LEVEL INDICATOR (RSA 1350)

LEVEL

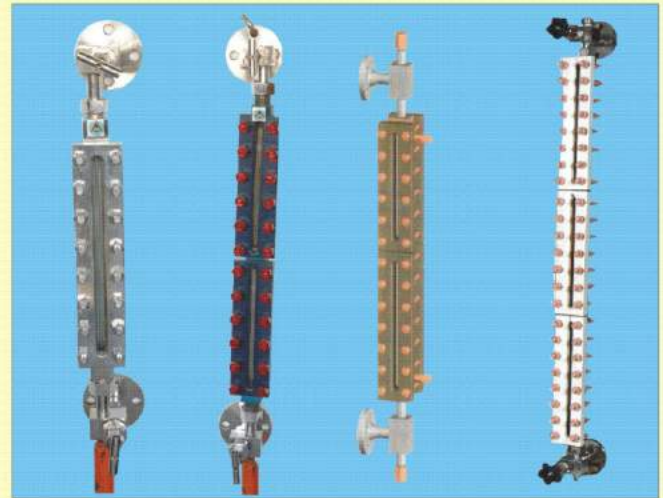
It is designed for most critical requirements of liquid level in vessels under high pressure & temperature condition in petrochemicals, fertilizer and pharmaceuticals & chemical industries involving inflammable toxic liquid, high temp Liquids.

FEATURES :

The glass has precision moulded prismatic grooves cut on its inner side coming in contact with the medium. These level gauges have liquid chamber made out of single piece bar stock. Liquid level in the slotted chamber is seen through heavy duty toughened glasses. These glasses are clamped firmly on the chamber using carbon steel cover plates and using with CS "U" Bolts & Nuts.

Material of construction available

Liquid Chamber :	Machined out of single piece bar solid bar stock made of M.S. / S.S. / P.P.
Cover Plates :	M.S./ S.S.304 / S.S.-316.
"U" Bolts & Nuts :	C.S./ S.S.304 / S.S.-316.
Cushion :	CAF.
Packing :	Imported /Teflon.
Glass :	Indian toughened glass / Imported klinger
Test pressure :	50 kg / cm ² Max.
Temp. :	350°C.
Isolation valve :	Isolation can be provided with built in auto shut off or simple isolation valve without shut off.
Mounting :	Flanged or screwed end.
Available Length :	In single piece 3.5 meter.



ARCYLIC BODY MANOMETER (RSA 5130)

- A) U tube type Manometer ranges : 50-0-50, 100-0-100 mm, 150-0-150, 200-0-200, 250-0-250 mm WC.
B) Single limb type Manometer Range 0-100, 0-200, 0-300, 0-400 in mm.
C) Inclined Manometer Range 0-5, 0-10, 0-15, 0-20, 0-25, 0-30, 0-50 mm.

MANOMETER

Double limb U tube type industrial Manometer (RSA 5004)

U tube type Manometer primary standard manometer used for precision measurement of pressure, Vacuum, differential pressure and flow measurement in plant and labs where certain accuracy is required.

Available : In wall mounted and stand mounted.

Range : 300 - 0 - 300 mm WC / Hg.
500 - 0 - 500 mm WC / Hg

Casing : Alluminium powder coated.

scale : milky white machined engraved.

Glass Tube : Borosilicate heavy wall thickness.

Wetted parts : S.S. - 304.

Packing : Neoprene / Teflon.

Single limb Industrial Manometer (RSA 5040)

Single limb well type direct reading manometer for the precision measurement of pressure, vacuum differential pressure, flow and liquid level measurement.

Range : 0-760 mm WC / Hg or 0-1000 mm WC / Hg.
Other construction details are remain as above

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GLASS TUBE ROTAMETER (RSA 3006)

FLOW

Rotameter are designed for the accurate measurement of rate of flow for liquids and gases. The rotameter is mounted on vertically, A complete rotameter installation consists of tapered glass tube and shielded from all the sides with clearfront visibility. Inside the tubes, the float provides indication of flow rate.

FEATURES :

1. Over all face to face length 500mm for flanged connection.
2. Easily interchangeability of tubes without disconnection from the lines.
3. Scale Length 180-210mm.
4. Body M.S. powder coated or SS on request.
5. Cover M.S. powder coated .
6. Accuracy $\pm 2\%$ of FSD
7. Detachable scale with flow rate .
8. End connection rotatable through 360 .
- 9 Connection - Flanged & screwed end .
- 10 Cover glass protected with rubber.
- 11 Gland Bolt: SS 304 Strictly
- 12 Packing : pure teflon.



Material of construction available

Metering tube : Borosilicate glass tapered.
Flow range available : 25 - 30000 LPH of water & 0.1 - 300 nm³/hr of air at NTP.
Floats : SS-0316 / 304 / MS./ S.S. / PP. / Pure Teflon.
End Connection : SS-316 / 304 / MS./ S.S./ P.P. / Pure Teflon Lined.
Packing : Pure teflon + neoprene& silicon on request
Gland : C.S. Epoxy Coated / SS on request
Body : M.S. Powder coated / SS on request

SPECIFICATION DATAS REQUIRES FOR OFFER

1. Name of fluid (service) .
 2. Density / Specific gravity.
 3. Flowrange.
 4. Scale marking in LPH / LPM /kg/hr/USGPM.
- OPRATING PRESSURE : Min - max -Working.
OPRATING TEMPERATURE : Min -- Max. - Working.

Material of wetted parts :

LINE SIZE : Flanged / Screw.

ORIENTATION : Vertical -top bottom.

SIDE -SIDE: Top & Bottom.

INLET-side & OUTLET- vertical vice versa.

Note : Prevents of glass tube breaking to always open outlet valve & gradually operates inlet valves sizes available from 15 nb to 100 nb pipe size . Flow Ranges available from 25 LPH to 30000 LPH of water & 0.1 to 300nm³/hr Air at NTP.

PURGE ROTAMETER (LOW FLOW RATE) (RSA 3240)

Suitable for measurement of low flow rate of liquid / gases. The standard mounting is 1/4" BSP rear and several arrangements of flanged or hose nipple connection can be offered on request.

Ranges Available

For water : 500 cc / min to 10 LPM.

For Air : 100cc / min to 1000 LPM at NTP.

Feature : Glass tube & acrylic body available .

Regulator Valve : Needle valve for controlling of flow.
at inlet & easily to panel Mounting.



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ACRYLIC BODY ROTAMETER (RSA 3060)

FLOW

It is mainly used for water / salt water, air, nitrogen, hydrogen, natural gas. The acrylic body integral machined cut in acrylic body from imported transparent acrylic blocks sheets.

Material of construction available

Metering tube	: Solid acrylic block.
Body	: Imported transparent acrylic block.
Wetted Parts	: M.S. / S.S. / P.P. / Teflon.
Orientation	: Top- Bottom / Back -Back
Connections	: Screwed / flanged / hose nipple.
Scale	: Engraved on body.
Packing	: Neoprene / teflon / silicon.
Temp	: Max 70°C.
Pressure	: Max 15 kg/cm ² .



METAL TUBE ROTAMETER (RSA 3150)



Suitable for metering of opaque fluid under high operating pressure & temperature. It is designed to measure a flow rate of liquids and gases under critical conditions. It consists of tapered metal tube, magnetic float & angular indicating assembly.

Available in SS-316 / SS-304 / SS-316L With flanged connection Line size from : 20 NB to 100 NB.

Flow Range : 100 to 50000 LPH of water at atmospheric temp & 2.5 to 2000 NM³ / hr of air at NTP.

Accessories : High & low flow alarm electrical transmitter with 4-20 output temp. Accuracy : $\pm 2\%$ of FSD & $0.5\% \pm$ FSD on request.

BY PASS ROTAMETER (RSA 3330)

By pass rotameter suitable for the most economical provides a solution for measuring large rates of flow & suitable in pipelines from 40 NB to 350 NB.

Available in variety of materials carrier ring impulse piping and the flow rate through the rotameter as a flow indicator with volumetric.

The orifice plate dimensions are based on ISO 5167 / BS1042 / BSA

We require datas for offering.

1. Flow rate mini / max.
2. ID of main pipeline Exactly.
3. Flanges of main pipeline .
4. Pressure & temp.
5. Material of wetted parts.



RSA INSTRUMENTS PVT. LTD.

MAGNETIC LEVEL SWITCHES

SWITCHES

SIDE MOUNTED MAGNETIC LEVEL SWITCHES (RSA 2007)

Side Mounted Magnetic Level Switches work on the principle of magnetic repulsion and therefore they are glandless and leak proof instruments. A permanent magnet fitted in the tail piece of the float repels another magnet inside the switch housing which in turn operates an SPDT MICROSWITCH. microswitch contacts can be utilized for initiating audio-visual signals or pump control.

FEATURES

As our switches work on magnetic repulsion principle, they are Glandless and leakproof.

No Power Consumption.

Internal assembly wiring are teflon insulated.

Internal switch assembly bracket of cast aluminium.

Maximum working pressure 10 Kg / CM².

Maximum working temperature - 250°C. process temperature.

Contact rating of MICROSWITCH 5 amp at 230 VAC resistive.

No of Contact : 1 change over as standard. Optional 1 No + 1 NC.

Suitable for 40 NB nozzle mounting - Float dia 37 mm & 50 NB nozzle mounting- Float dia 48 mm.



Note : Flanged connection as per ASA/BS/DIN available on request as per customer requirement.

CAUTION

- Side mounted level switches must always be mounted horizontally with outgoing cable entry facing down wards.
- Level Switches Should not be used for direct starting / stopping of pumps
- An External relay or Contactor Must always be used in Conjunction with the Level Switch.

TOP MOUNTED MAGNETIC LEVEL SWITCH (RSA 2070)

Top Mounted Level Switch work on permanent Magnet Reedswitch basis. The floats which contain permanent Magnets move freely between their stops rising or falling with Liquid level movement. Hermetically Sealed within the tube are reed switches, Completed isolated from the medium. The Magnet's field actuated the reed switch as the float moves while the Stopper restrict overrun and prevent the reed switch returning to its original position. Stopper position should not be changed



CABLE FLOAT SWITCH RSA 2079



Qualities For Success

RSA INSTRUMENTS PVT. LTD.

LEVEL TRANSMITTER.RSA-9000 A

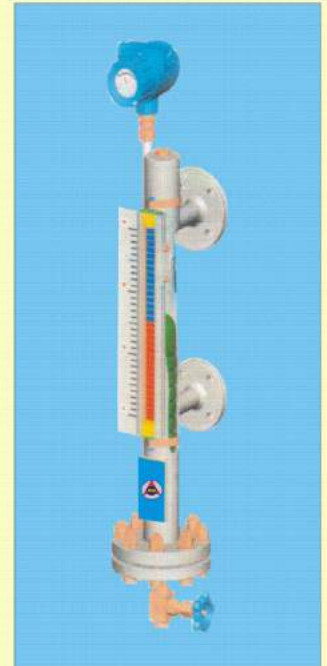
MAGNETIC FLOAT LIQUID LEVEL TRANSMITTER

TECHNICAL PARAMETERS

MODEL : SIDE MOUNTED LEVEL TRANSMITTER

Specification

Measuring Range	: 0-5000 MM AND ABOVE ON REQUEST.
Power Supply Voltage	:24 VDC
Out put Signal	: 4 mA - 20mA DC
Contact rating	: one normal open + one normal close.
Operating temperature	: -40° c. to 120°c. and above 250°c. on request.
Measuring accuracy	: +/- 10 mm
Protection class	: IP 65
Power supply Inlet	: 1/2" BSP (female thread)
Process connection	: Flange type
Alarm features	: Upper and Lower alarm - can be fitted at any position within the Measuring range.
Contact capacity	: Potential free - Reed switch output



MODEL ; TOP MOUNTED LEVEL TRANSMITTER RSA - 9000B

Specification

Measuring Range	: 0-4000 MM AND ABOVE ON REQUEST.
Power Supply Voltage	: 24 VDC
Out Signal	: 4 mA - 20mA DC
Contact rating	: one normal open + one normal close.
Operating temperature	: -40°c. to 120°c. and above 250°c. on request.
Measuring accuracy	: +/- 10 mm
Protection class	: IP 65
Power supply Inlet	: ½" BSP (female thread)
Process connection	: Flange 150 NB.
Alarm features	: Upper and Lower alarm - can be fitted at any position within the Measuring range.
Contact capacity	: Potential free - Reed switch output.



OPTION FEATURES :

Display	: 4 digit LED Display. Range & decimal point : -1999 to 9999 (field programmable)
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SIGHT FLOW INDICATOR (SIGHT GLASSES)

For Viewing of kinds in pipe lines, Different type of sight glasses can be offered like full view type double window type, etc.

FULL VIEW TYPE (RSA 4005)

Means of viewing the process to assure that the flow is continuous or Not the process turbidity, colour, etc. Full view type sight glass consists of a borosilicate glass pipe section fitted with a metal frame and both the flanges of frame welded with studs and the end of the glass pipe section sealed with Teflon bushes (top & bottom) with 2 nos. Of Teflon washers

Material of construction available

Frame : M.S. / S.S.-316 / S.S.304 / P.P / FEP Lined

Model : Check nut or Allen bolts type. Glass Borosilicate heavy toughened

Lined Size ; Frome - ½" to 9" Flange end / Screw end

DOUBLE WINDOW TYPE (RSA 4500)

(A) DRIP TUBE TYPE : Particularly suitable for vertical down ward lines having intermittent flow like in distillation column.

(B) ROTATOR TYPE : Best suited for lines carrying only water/ gases or dark solution where rotary movement can be easily detected

(C) RUBBER LINED TYPE : Specifically for effluents services / HCL / MIX ACID, etc.

(D) HIGH PRESSURE TYPE: Best Suited for high pressure and Temperature in pipe line of gases , Hazardous solvents, high pressurised reaction vessel

(E) FEP Lined : For Corrosive or Acid Application

TOUGHENED GLASSES (RSA 6003)

Round / Rectangular Toughened Glasses.

Reflex / transparent Toughened Glasses.

Boiler Gauge Glass Tubes.



MANUFACTURED BY :



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Due to continuous product development, specification are subject to change without notice

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