

# Rochester Gauges International



#### **Rochester Gauges International**

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Since 1958 Rochester Gauges Inc. in Dallas (Texas) has developed magnetic level indicators, level sensors, pressure and temperature indicators and thermometers.

In 1967 both Rochester Gauges International (Belgium) and Medidores Internacionales Rochester de C.V. (Mexico) started in business in order to meet the requirements of the European and South American markets.

Rochester Group, with its three production units, all of them ISO 9001 certified, is able to face the specific needs of the different markets. Rochester products are sold all over the world thanks to its distribution and representatives network active on the five continents.





Rochester equipments are used at present in numerous industrial applications and other ones such as:

- Chemistry and Petrochemical Industry
- Refrigeration
   (Ammonia, Refrigerant fluids, etc.)
- Liquified Petroleum Gases (Butane, Propane, LPG)
- Other liquified gases (CO<sub>2</sub>, SO<sub>2</sub>, etc.)
- Compression units and compressors
- Tractors and Agricultural machines
- Railway vehicles
- Construction machineries
- Lubrication and Hydraulic Oils
- Tank trucks and Semi-trailers
- Containers
- Fuel tanks
- Ships, caravans, recreation vehicles



## MAGNETIC FLOAT LEVEL GAUGES



#### **MAGNETIC COUPLING**

The Rochester magnetic liquid level gauge operates simply by means of a float actuating a powerful magnet inside the container underneath the gauge's head. This magnet actuates the dial's needle magnet to indicate the tank liquid content. The dial may be removed and replaced quickly anytime without loss of liquid, pressure, vacuum or costly downtime.

#### **APPLICATION**

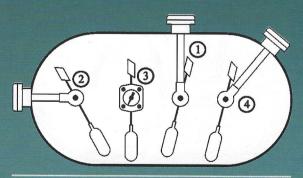
Rochester magnetic float level gauges are used to indicate the level of liquid in containers or tanks from 100 mm up to 5000 mm diameter in stationary or mobile applications.

Liquid currently gauged: fuel, diesel fuel, gasoline, hydraulic oil, lubricating oil, water, chemicals, refrigerants, liquified gases such as propane, butane, ammonia, Freon, carbon dioxide, sulphur dioxide etc. Rochester magnetic float level gauges are currently used on compressors, generators, agricultural and construction machinery, boats, IBC containers, domestic tanks, cylinders, storage tanks, trucks and trailers.

# TYPE OF GAUGES AND MOUNTING POSITIONS

Geared type: gauges are made with Stainless Steel gears which allow any mounting position such as top, bottom, side, end or angle.

Lever type: gauges are intended for horizontal mounting (end or side).



Vertical (1)

Horizontal (2) and (3

Angle (4



Spiral type: gauges are used in narrow tanks where the space does not allow the use of a float arm, vertical mounting (top).

#### **CHOICE OF MATERIALS**

Depending on the application, Rochester gauges offers a wide range of materials such as Aluminium, Brass, Stainless Steel, Plastics. Float can be supplied in Aluminium, Stainless Steel, Nitril rubber, Plastic. Head can be supplied in Aluminium, Stainless Steel, Brass, Zinc or Plastic.

# CHOICE OF HEAD SIZE AND TANK CONNECTION

Depending on the model and the application, heads for pressure up to 40 bar can be supplied. The tank connection can be flanged (Junior, Senior or Magnetel) or threaded 3/4" NPT, 1" NPT, 1-1/4" NPT, 1-1/2" NPT. Rochester can also supply a range of welding or threaded adapters.

#### CHOICE OF DIALS

Depending on the model, Rochester gauges can be supplied with dials of 40 mm, 50 mm, 100 mm, 200 mm diameter or side reading dial. Dials with variable resistance, Hall effect sensor or explosion proof transmitter can also be supplied for most of the Rochester gauges in order to supply an electrical signal and direct reading on the tank.

#### REMOTE

Remote indication systems including level set points and communication output (RS or modem) can be supplied.

#### **FUEL SENDERS**

Rochester fuel senders are used extensively on fuel tanks of tractors, heavy trucks, off road vehicles, construction machineries, generators and boats.

Those fuel senders can be offered in Aluminium or Stainless Steel construction. Special features such as pass through connector or tubes in head for fuel suction and/or return, can be provided.





Use: fuels, hydraulic oil, lubricating oil on compressors, generating sets, light vehicles, liquefied gases such as refrigerants, butane, propane, ammonia

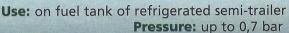
Pressure: up to 25 bar

Materials: Aluminium, Brass, Plastic, Nitrile rubber

Type: geared or lever Dial: 40,50 or 100 mm

Mounting: flange and (4) screws

6200

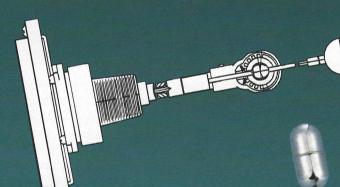


Materials: Plastic, Aluminium, Nitrile rubber Type: geared for horizontal mounting Dial: 40 mm

Mounting: flange or threaded head



P6284



Use: replacement of Rotogauge™ on propane or ammonia tanks of 2200 mm

Pressure: up to 25 bar

Materials: Aluminium, Plastic, Stainless Steel,

Nitrile rubber

Type: geared for horizontal mounting

diameter maximum

Dial: 50 or 100 mm Mounting: 1" NPT

P6293

Use: On storage tank of 5000 mm diameter maximum for chemical, petrochemical products, liquified gases such as Butane, Propane, Ammonia, Sulphur Dioxide, refrigerants etc.

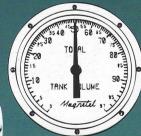
Pressure: up to 40 bar Materials: Aluminium, Steel, Stainless Steel

Type: geared

Dial: 100 or 200 mm

Mounting: flange with (8) studs and nuts







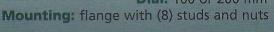
Use: On trucks or semi-trailers with tanks of chemical, petrochemical products, liquified gases such as Butane, Propane, Ammonia, refrigerants etc.

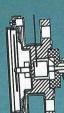
Pressure: up to 40 bar

Materials: Steel, Stainless Steel

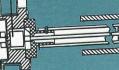
Type: geared

Dial: 100 or 200 mm

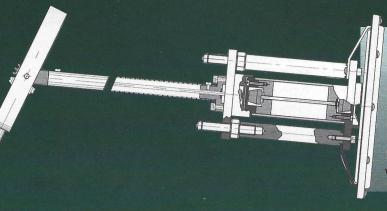




6300







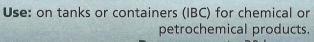
**Use:** on mobile or stationary insulated tanks holding liquified gases such as CO<sub>2</sub> or N<sub>2</sub>O

**Pressure:** up to 40 bar

Materials: Steel, Stainless Steel

Type: geared
Dial: 200 mm
Mounting: flange
with (8) studs and nuts

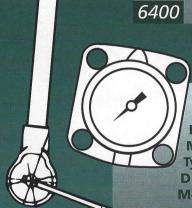
D6300



Pressure: up to 30 bar Materials: Stainless Steel Type: geared

Dial: 50 or 100 mm

Mounting: flange and (4) screws



**Use:** diesel, gasoline, fuel, oil, heating oil in mobile or stationary, low pressure tanks and containers (IBC).

Pressure: up to 1,7 bar

Materials: Aluminium, Plastic, Nitrile rubber

Type: geared or lever Dial: 40 or 50 mm

Mounting: flange and (4) screws

6500

**Use:** on gasoline, diesel or fuel tank of trucks, boats, generators, light vehicles.

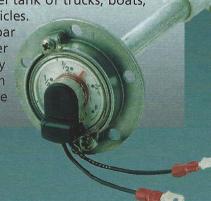
**Pressure:** up to 0.7 bar

Materials: Aluminium, Plastic, Nitrile rubber
Type: geared for top mounting only

Dial: 40 mm

Mounting: standard SAE flange

6700





Use: On diesel tank of locomotive and

railway vehicles.

Pressure: up to 3,4 bar

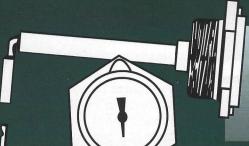
Materials: Aluminium, Stainless Steel,

Nitrile rubber
Type: geared
Dial: 100 mm
Mounting: flange



# R

## MAGNETIC FLOAT GAUGES



Use: fuels stored in flat end tanks

Pressure: up to 0,6 bar

Materials: Aluminium, Nitrile rubber

Type: lever

Dial: 40 or 50 mm

Mounting: 1-1/4" or 1-1/2" NPT

F7183/7283

B7200

Use: LPG

Pressure: up to 25 bar

Materials: Brass, Aluminium, Plastic,

Nitrile rubber

Type: geared

Dial: 40 mm

Mounting: 1-1/4" NPT



**Use:** LPG cylinders **Pressure:** up to 25 bar

7300

**Materials:** Zinc, Aluminium, Plastic, Nitrile rubber

Type: geared

Dial: 40 mm Mounting: 3/4" NPT



**Use:** LPG cylinders for fork lift truck **Pressure:** up to 25 bar

Materials: Zinc, Plastic, Nitrile rubber

Type: geared

Dial: 40 mm Mounting: 3/4" NPT



7384-04





**Use:** lubricating oil of compressors

**Pressure:** up to 25 bar **Materials:** Brass, Aluminium

Type: lever

Dial: 20 mm conical for top and side view

Mounting: 3/4" BSPT





**Use:** in marine application for fuel, hydraulic oil, lubricating oil, water, sea water

Pressure: up to 13 bar Materials: Stainless Steel

Type: geared Dial: 100 mm Mounting: flange

7600

**Use:** on narrow tank of oil, gasoline, fuel oil, water in

marine environment. **Pressure:** up to 1,7 bar

Materials: Brass, Stainless Steel

Type: spiral Dial: 40 or 50 mm

Mounting: 1-1/2" NPT



8200



**Use:** hot or pressurised water on dishwashers, boilers, radiators, on marine tanks and fire fighting equipments and vehicles.

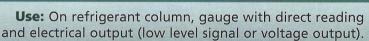
Pressure: up to 17 bar

Materials: Brass and Stainless Steel

**Type:** geared or lever **Dial:** 40 or 50 mm

Mounting: flange and (4) screws

8400



Pressure: up to 31 bar

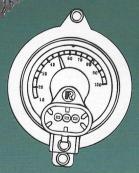
Materials: Brass, Aluminium, Stainless Steel

Type: geared Dial: 40 mm

Mounting: flange and (4) screws









**Use:** for water or mixture of water and glycol at ambient temperature and pressure on boats, caravans, de-icing equipments etc.

Pressure: up to 1,7 bar

Materials: Plastic, Brass, Stainless Steel, Nitrile rubber

**Type:** geared or lever **Dial:** 40 or 50 mm

Mounting: flange and (4) screws







**Use:** on narrow tank for oil, fuel, diesel oil, gasoline on stationary or mobile equipment such as compressors, generators, etc.

Pressure: up to 1,7 bar Materials: Zinc, Brass, Steel,

Stainless Steel

Type: spiral

Dial: 40 or 50 mm

Mounting: 1-1/2" NPT

8600

8700

**Use:** on water tanks at ambient temperature and pressure used on boats, caravans etc.

**Pressure:** up to 0,7 bar **Materials:** Plastic, Brass, Nitrile rubber

**Type:** geared for top mounting only. **Dial:** 40 mm

Mounting: standard SAE flange

\* can be supplied with loose float for field adjustment





Use: LPG

Pressure: up to 25 bar

Materials: Zinc, Brass, Aluminium, Plastic,

8900/B8900

Nitril rubber
Type: geared
Dial: 40 mm
Mounting: 1" NPT



# DIALS AND SENSORS FOR MAGNETIC FLOAT GAUGES





Direct reading dial equipped with variable resistance 0-30 Ω, 0-90 Ω, 240-30 Ω, 70-10 Ω, 5-180  $\Omega$ , other values on request







Direct reading dial with Hall effect sensor Voltage output 0-5 Volt





**Explosion proof** sensors providing level set points, voltage output or current output 4-20 mA







A STATE OF THE STA	Senio (100 i
25 TOTAL 70 TANK VOLUME 80	
15 LIQUID LEVEL 90	
5 DAL NO. E-415 95	

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-		
LI 1 12 210VAC	C NO NC C NO NC Relay I Relay 2	C NO NC C NO NC Relay 3 Relay 4 Level 1 0
CE "	07- 0+	Level 2 🐞
V	70	terel3 🛢
Gauge Cirl CFE	Sensor + S = Sh	1.evel 4   4-20mA RS output + + Sh A H =
000000000	000000000	000000000

Remote indication of the tank content, (4) site adjustable level set points, optional output: 4-20 mA, RS 232, RS 485, modem.



## **FUEL SENDERS**

Use: For top mounting on Aluminium,

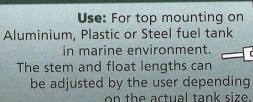
Plastic or Steel fuel tank in marine environment Material: iridited Aluminium or Stainless Steel

Resistances: 240-30  $\Omega$ 

Options: float rod loose for field

adjustment by user.

8341-7000

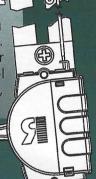


on the actual tank size. Material: iridited Aluminium or

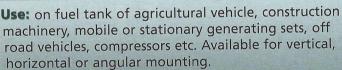
Stainless Steel Resistances: 240-30  $\Omega$ ,

10-180  $\Omega$ , 0-90  $\Omega$ .

8349-07



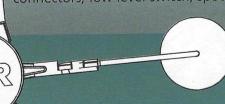
0



Material: Aluminium or Stainless Steel.

Resistances: 240-30  $\Omega$ , 10-180  $\Omega$ , 0-90  $\Omega$ Options: pass through cables with or without connectors, low level switch, specific ohm ranges.

8340-07-08



For specific applications, Rochester can supply fuel sensors with tubes in head, customised shape, 8340

dimensions, and resistive curve.

## **Rochester Gauges Inc.**

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