



SM FLOAT

SPECIFICATION & DESIGN GUIDE

- Challenge*
- Collaboration*
- Innovation*
- Best of the best*

NBR Float Specifications

A. Product Characteristics

- A homogeneous, closed cell synthetic rubber based flotation material, to provide the highest lifting force (buoyancy) for fuel systems of automotive industry as well as liquid level sensing industry.
- The uniformity of the cell structure provides with superior reliability in difficult applications.
- The closed cell nature of NBR Float eliminates the possibility of sudden catastrophic failure of sinking down to the bottom of liquids, associated with alternative materials based floats.
- The easier molding ability into complex shapes and sizes magnet insertion whatsoever, without impairing flotation properties.
- The superior chemical resistance and buoyancy in a wide range of fluids, especially new fuel mixtures like alcohol blended fuels.

B. Material Specifications

NBR floats can be molded into various shapes(even complex) and sizes according to tooling(molds) design, without impairing flotation properties:

- **Density(specific gravity)**

Primary density of NBR Floats can be divided into two groups. Special density float is available upon request.

- 0.16~0.20 g/cm³ : oil resistant float for fuel senders of automotive industry
- 0.25~0.33 g/cm³ : pressure resistance floats for OPD valve of LPG cylinders and multivalve of fuel conversion kits

- **Operating temperature range**

-50°C to 100°C. Capable to 149°C with special processing.

- **Operating pressure**

Lower than 18 kg/cm²(250psi), but hydrotest pressure is either 30 kg/cm²(420 psi) or 53 kg/cm²(750 psi) to API code for OPD valve

- **Service fluids**

NBR Float provide superior chemical resistance and buoyancy in a wide range of fluids, especially new alcohol blended fuel mixtures (cf. liquid compatibility guide).

- **Metal inserts**

Such shapes as tubes, rods and magnets can be affixed to the float, when necessary.

NBR Float Specifications

C. Key Applications

NBR Float has a wide application range for primary three groups of automotive industry, liquid propane industry and other liquid level sensing industry.

Automotive industry including motor cycle

- **Application**

Fuel sender (fuel delivery module), Roll-over valve for prevention of fuel leakage, Fuel vent valve ORVR for prevention/vapor recovery of volatile organic compounds during fueling.

- **Typical feature**

Density : below 0.25

Shape and size : depends on fuel reservoir design and location

LEGEND

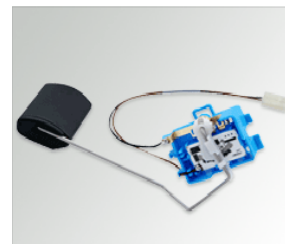
A : Various floats

B : Fuel sender assembly

C : Fuel delivery module



A



B



C

LPG industry

- **Application**

Liquid propane level gauge & OCP valve, Multivalve for fuel conversion kits and OPD valve for cylinder



NBR Float Specifications

- **Typical feature**

Density : above 0.3 for high pressure resistance

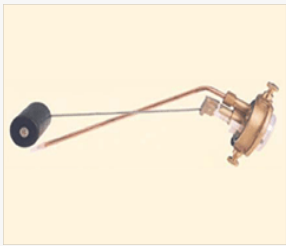
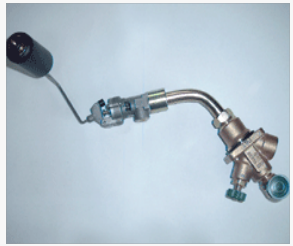
Shape and size : depends on level gauge & OPD valve design



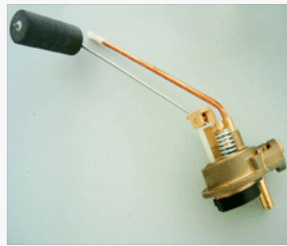
LPG fuel gauge for automotive industry



Over charge prevention valve



Multivalve for fuel conversion kits



Other industry

- **Application**

Liquid level sensing industry

- **Typical feature**

Density is higher due to magnet(metal) insertion

Shape and size : depends on level sensor design

