

Metal-Floats

for Liquid Level Measurement



HÄBERLE + CO GMBH
The Float Manufacturer



- **Float Ball**
- **Cylinder Float**
- **Magnetic Float**
- **Individual Float**

For

- **Liquid Level Switches**
- **Level Measurement**
- **Interface Level**

Häberle & Co GmbH, since 125 years competently in Metal and Plant Constructions

About us

As a forward-looking company with a long tradition, Häberle & Co., based in Ludwigshafen/Rhein, Germany, takes pride in always providing the best service to our customers by offering competent and individual planning and an excellent product quality. This is why our products give trouble-free service for many years and why well-known companies worldwide trust us as their competent and reliable partner whose performance is based on a perfect combination of expert advice, dedicated service and accurate processing of orders.

Our in-house production depth is continuously growing and all the interaction of production stages have been optimised according to DIN EN ISO 9001 quality management.

In-house production depth

Our main product range encompasses individual constructions which we are also able to produce in large quantities. The production of tanks and technical apparatus is one part of our production range; however, our core business is the manufacturing of a full range of metal floats for fluid level measurement, e.g. floats for float switches, guided magnetic floats, interface level floats, and metal spheres from 10 to 1200 mm diameter as well as special types of cylinders and cartridges. We can process any weldable material, such as stainless steel, hastelloy, titanium, covations

Special Constructions / Innovations

Innovative, purpose-built, made-to-measure products - no matter how complicated -- are our daily routine. But our customers also appreciate our expertise in the construction of prototypes. For instance, design objects in spherical forms, e.g. large world globes of several feet in diameter, are always a welcome challenge.

Quality

All Häberle floats are manufactured according to DIN ISO 9001:2000 quality specifications and are thoroughly tested before shipping. Not only make we sure that their mechanical and surface properties are up to standard, but we also carry out a pressure test.

Our customers

Planer, Planners, technicians and engineers can rely on our expert knowledge when it comes to the design and production of complex objects. Most of our clients are regular customers from Europe, USA, the Far East and Africa.



*Häberle & Co. GmbH, since 125 years
competently in Metal and Plant Con-
structions.*

Content & Services

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Services

Whichever type of float or sphere you want, we build it!

- **Technical consultation by qualified coworkers**
- **Individual planning**
- **We build special forms of float according to your requirements**

Tel. +49 621-55 30 48
Fax: +49 621-55 26 13



Certification:
DIN ISO 9001:2000



Internet:
www.level-control-switch.com

...we support you gladly!
Use our experience
and competence.


Float types / standard

Without guiding or with mounting

Float Ball:	Type 1*
Use:	Level Switch
Mounting:	Custom



Cylinder Float:	Type 2*
Use:	Level Switch
Mounting:	Threaded bar




Cylinder Float:	Type 2*
Use:	Level Switch
Mounting:	Bar with drilling




Cylinder Float:	Type 3* (with radius)
Use:	Level Switch
Mounting:	Custom



Cylinder Float:	Type 4*
Use:	(curved bottom)
Use:	Level Switch
Mounting:	Round bar



Cylinder Float:	Type 4 (with segments)
Use:	Level Switch
Mounting:	internal magnet




* You can get this float also with a magnet, without mounting. Magnets must be supplied by the customer.

Float types / standard

Magnetic Floats with guiding pipe


Float Ball:	Type 20
Use:	poished
Guiding:	Magnetic Float
	Extended pipe




Cylinder Float:	Type 21
Use:	Magnetic Float
Guiding:	Pipe




Cylinder Float:	Type 21
Use:	poished
Guiding:	Magnetic Float
	Pipe



Cylinder Float:	Type 21
Use:	poished
Guiding:	Magnetic Float
	Custom



Cylinder Float:	Type 21
Use:	Magnetic Float
Guiding:	Pipe with large diameter



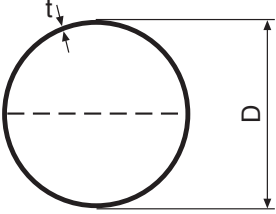
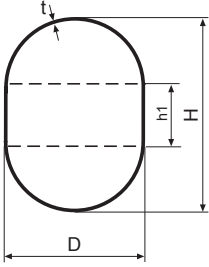
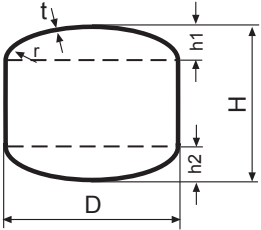
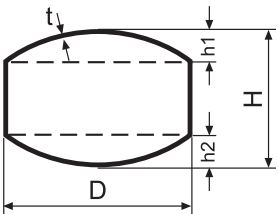
Cylinder Float:	Type 22 (with radius)
Use:	poished
Guiding:	Magnetic Float
	Pipe



* You can get this float also with a magnet, without mounting. Magnets must be supplied by the customer.

Float basic bodies

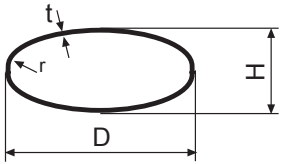
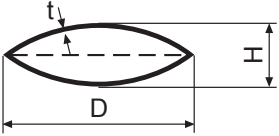
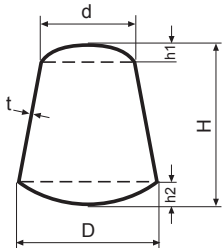
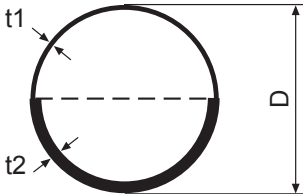
Without guiding or with mounting

<p>Float Ball: Type 1</p> 	<p>Diameter (D): From 10mm - 1.200mm</p> <p>Thickness (t): 0,2mm - 4mm</p> <p>Metal: Custom</p> <p>Mounting*: Custom or magnet</p>
<p>Cylinder Float with ball bottom: Type 2</p> 	<p>Diameter (D): From 10mm - 1.200mm</p> <p>Height (H): D and custom</p> <p>Height (h1): Custom</p> <p>Thickness (t): 0,2mm - 4mm</p> <p>Metal: Custom</p> <p>Mounting*: Custom or magnet</p>
<p>Cylinder Float with radius: Type 3</p> 	<p>Diameter (D): From 10mm - 1.200mm</p> <p>Height (H): h1 + h2 and custom</p> <p>Height (h1): Up to 300mm</p> <p>Height (h2): Up to 300mm</p> <p>Radius/curved: Custom</p> <p>Thickness (t): 0,2mm - 4mm</p> <p>Metal: Custom</p> <p>Mounting*: Custom or magnet</p>
<p>Cylinder Float with curved bottom: Type 4</p> 	<p>Diameter (D): From 10mm - 1.200mm</p> <p>Height (H): h1 + h2 and custom</p> <p>Height (h1): Up to 300mm</p> <p>Height (h2): Up to 300mm</p> <p>Thickness (t): 0,2mm - 4mm</p> <p>Metal: Custom</p> <p>Mounting*: Custom or magnet</p>

* You can get this float also with a magnet, without mounting. Magnets must be supplied by the customer.

Float basic bodies

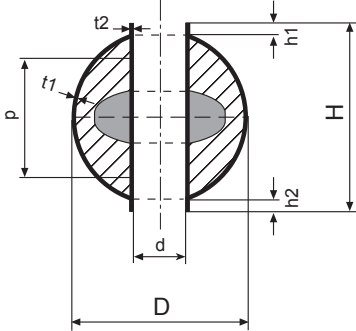
Without guiding or with mounting

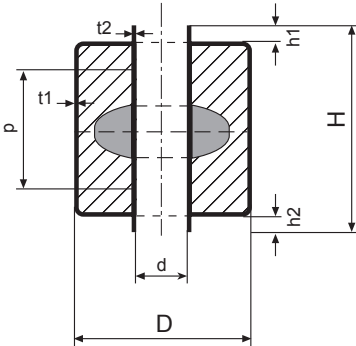
<p>Oval Float: Type 5</p> 	<p>Diameter (D): From 10mm - 1.200mm</p> <p>Height (H): Up to 250mm</p> <p>Radius/curved: Custom</p> <p>Thickness (t): 0,2mm - 4mm</p> <p>Metal: Custom</p> <p>Mounting*: Custom or magnet</p>
<p>Lens Float with curved bottom: Type 6</p> 	<p>Diameter (D): From 40mm - 1.000mm</p> <p>Height (H): Up to 300mm</p> <p>Thickness (t): 0,2mm - 4mm</p> <p>Metal: Custom</p> <p>Mounting*: Custom or magnet</p>
<p>Cone Float Type 7</p> 	<p>Diameter (D): From 60mm - 1.000mm</p> <p>Diameter (d): Up to 400mm</p> <p>Height (H): h1 + h2 and custom</p> <p>Thickness (t): 0,2mm - 4mm</p> <p>Metal: Custom</p> <p>Mounting*: Custom or magnet</p>
<p>Float Ball with seal characteristic: Type 8</p> 	<p>Diameter (D): From 10mm - 1.200mm</p> <p>Thickness (t1): 0,2mm - 4mm</p> <p>Thickness (t2): 0,2mm - 4mm</p> <p>Metal: Custom</p> <p>Mounting*: Custom or magnet</p>

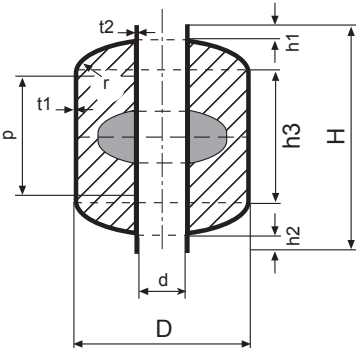
* You can get this float also with a magnet, without mounting. Magnets must be supplied by the customer.

Float basic bodies

Magnetic Floats with guiding pipe

Magnetic Float Ball: Type 20	
	Diameter (D): From 40mm - 1.200mm
	Height (H): $h1 + h2 + D$
	Inside diameter (d): Max. $2/3 D$
	Height pipe (h1): Up to 200mm
	Height pipe (h2): Up to 200mm
	Thickness (t1): 0,2mm - 4mm
	Thickness (t2): 0,2mm - 4mm
	Magnetposition (p): Custom
	Metal: Custom
	Magnet: Supplied by customer
Guiding: Pipe	

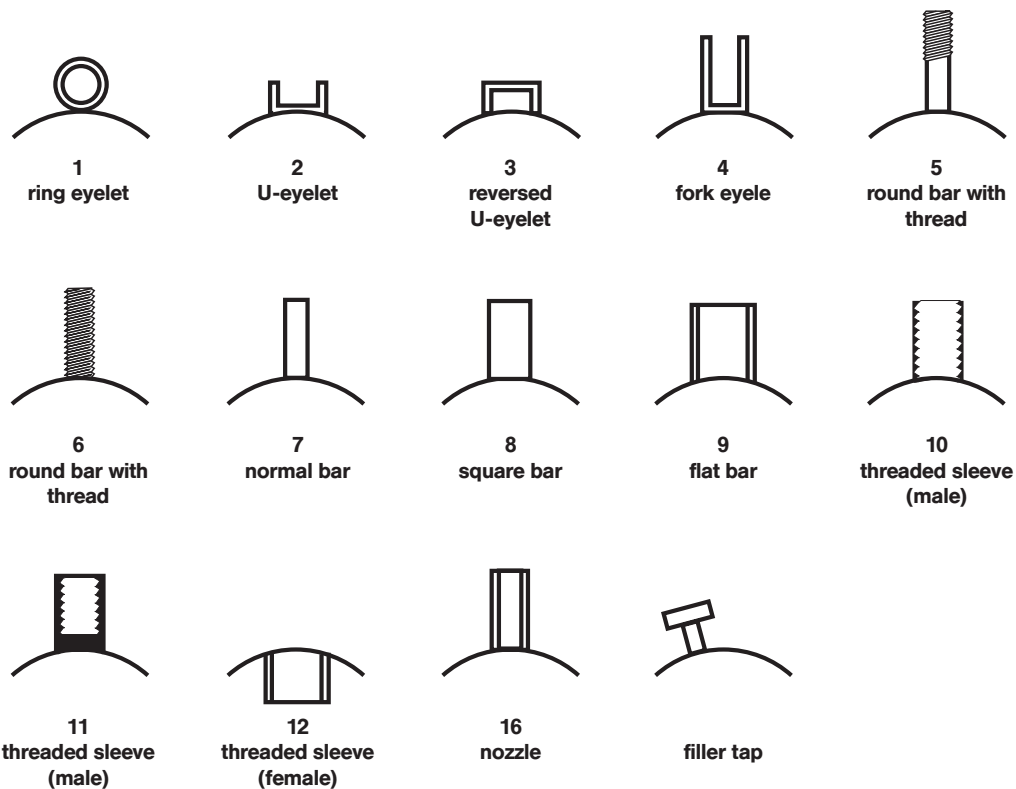
Magnetic Cylinder Float: Type 21	
	Diameter (D): From 40mm - 1.200mm
	Height (H): $h1 + h2 + \text{custom}$
	Inside diameter (d): Max. $2/3 D$
	Height pipe (h1): Up to 200mm
	Height pipe (h2): Up to 200mm
	Thickness (t1): 0,2mm - 4mm
	Thickness (t2): 0,2mm - 4mm
	Magnetposition (p): Custom
	Metal: Custom
	Magnet: Supplied by customer
Guiding: Pipe	

Magnetic Cylinder Float with radius: Type 22	
	Diameter (D): From 40mm - 1.200mm
	Height (H): $h1 + h2 + D$
	Inside diameter (d): Max. $2/3 D$
	Height pipe (h1): Up to 200mm
	Height pipe (h2): Up to 200mm
	Radius/curved (r): Custom
	Materialstärke (t1): 0,2mm - 4mm
	Materialstärke (t2): 0,2mm - 4mm
	Magnetposition (p): Custom
	Metal: Custom
Magnet: Supplied by customer	
Guiding: Pipe	

* Magnets must be supplied by the customer.

Mounting / connector (standard)

Float mounting



Float Materials

We can process nearly all weldable materials

Common materials:

- Aluminium
- Stainless Steel
- Copper
- Brass
- Titanium
- Hastelloy

Special materials:

- Tantalium
- Circonium
- Hafnium
- Silver
- Gold

Float magnets:

Magnets do not belong to our delivery program.

Magnets must be supplied by the customer. You can order magnets e.g. at Magnetfactory Schramberg: www.magnete.de

Further materials on request.

Precision devices made by Häberle

Special solutions

A speciality of Häberle is the production of individual floats. We build special forms of floats according to your requirements



Example: Midget Float & Art objekt for the Abu Dhabi Gun Club.

Quality

It all depends on the right processing of the material:

Floats has to withstand the immense temperatures, pressures and corrosive substances involved in chemical processes. Here, the weakest point is the welding seam that holds the two hemispheres of the float together. If the welding seam and the hemispheres are made from different materials, temperature stresses will result in fatigue failure of the seam. But even with seam and spheres made from the same material, some welding techniques, e.g. laser arc welding, may result in brittle, inhomogeneous seams. Therefore, specialised techniques such as tungsten inert gas (TIG) welding are often used.

These days, even metal sheets as thin as **0.2 mm can be TIG-welded**. To meet the above specifications and proper function under all working conditions, every float is designed and manufactured indi-

vidually - thus ensuring the trouble-free performance of the float or magnetic switch.



A perfectly homogeneous welding seam.

Pressure testing:

Before shipping, every single float will be pressure tested to ensure leak tightness.

- Floats can also be X-rayed upon request
- All parts are examined to 100% for tightness
- Max. pressure test 60 bar

Further information and certificates::

- Quality control: Our company is officially certified to DIN ISO 9001:2000
- All our welders hold welding qualification certificates issued by the German Technical Control Board (TÜV).
- The welding seams of all items from our production can be X-rayed upon request.
- Of course, we also offer root-shielded welding.
- We hold a Certification of Re-marking and participate in an external supervision programme for specialised manufacturers according to section 19 L WHG of the Technical Control Board (TÜV).
- We are officially registered and certified manufacturers of pressure tanks.

Faxform for an offer

Häberle & Co. GmbH | Inquiry for an Float-Offer

Faxform

Please send the fax to: +49 621 - 55 26 13

First Name, Last Name:

Company:

Address:

Fon:

Fax:

E-Mail:

Do you have further informations for us?:

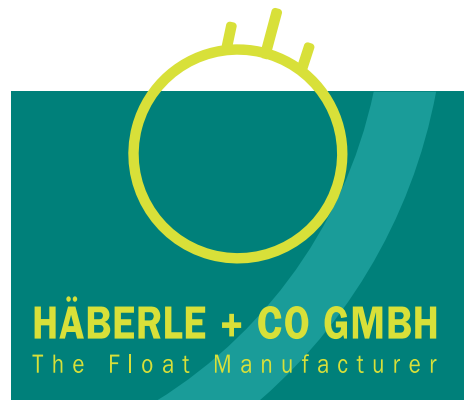
Your technical informations:

1) Which Float type do you need (designation)?:

2) Float-Material (e.g. Stainless Steel 1.4571)?

3) Please give us a exact technical description of float with a drawing (look at sheet 7-9)

4) How many pieces do you need?



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November 2008

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Häberle-Floats:

- for Level Switches
- for Level Measurement
- for Interface Level Measurement
- for Optical Measurement
- for Electronic Measurement
- for Foodstuffs
- für Magnetostriction