

develogic Modular Pressure Housings

Titanium housings convince by their quality but due to the great prime cost of titanium the finished product turns out to be untradeable. As opposed to Titanium housings, Synthetic housings do not offer sufficient depth rating and are liable to leak during long term application. Standard stainless and super duplex steel housings are pretty heavy and do not provide corrosion resistance without protective anodes. Glass houses feature lower weight, corrosion resistance and lower acquisition costs. But, for sure, glass is a fragile material and cannot be opened and closed easily.

While developing modular pressure housings for subsea applications our engineers implemented tests on above mentioned commercially available housings. Since these houses did not meet our expectations, we decided to launch an affordable product, one that is smoothly usable, stainless and versatile.

All of our develogic pressure housings are long term corrosion-resistant, solid and lightweight without any protection anodes. Working under pressure is comfortable due to our convenient opening and closing housings without making use of any extra tools and screws.

MCH Standard Housing

MCH is our standard composite housing. It is available with an inner diameter of 110mm and an inner usable length of 470mm, which can be easily extended by adding another body by adapters.

Two standard housings are offered to meet the needs of our customers:

1. SW.MCH operates reliable in 750m depth
2. DW.MCH even works dependable in up to 6,000 m depth

Both MCH outer shells are made of resistive fiber-reinforced synthetics with superior long term corrosion-resistance. Compressive strength of DW.MCH is endowed with an 2nd inner-shell-sealing made of aerospace-aluminium with hard coat in order to provide additional safety.

The MCH caps are made of titanium in order to provide best rigidity. Cap plates are convertible and can be re-ordered at develogic. Convenient synthetic caps can be provided for shallow water applications. Our caps can be fixed by a user-friendly integral locking sleeve.

MCH Compact Housing

develogic MCH compact housing is the best choice for operating with smaller instruments when power is supplied externally. Design and advantages are adequate to our MCH standard housing. Our MCH compact housing cap is equipped with an integral locking sleeve for easy handling

MCH Large Housing

Our latest development, the MCH large housing, combines all the attractive features of our DW.MCH housing. The MCH large housing measures an inner diameter of 182mm and an inner usable length of 650mm. The MCH large housing can be used reliably in up to 6,000 m depth.

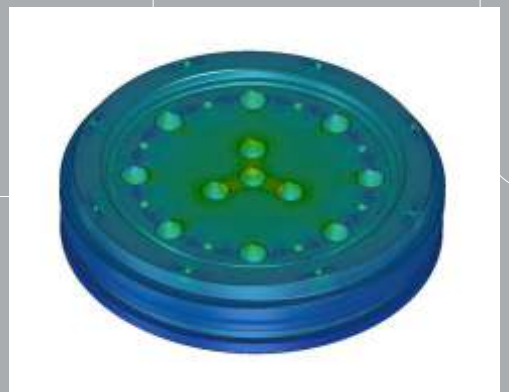
Modular Pressure Housings



MCH housings with develogic SONOVAULT sound recorders and RAFOS electronic units



MCH housing during deployment



Advanced 3D FE simulation

Housings

Product Specification

MCH Standard Housing

Operating Depth

Rated and tested to: 750 m / 6,000 m

Material

- Outer shell: Fibre reinforced POM / titanium
- Inner shell: High strength aerospace aluminium, hard coated

Dimensions

- Outer diameter: 153 mm
- Outer length: 630 mm
- Inner diameter: 110 mm
- Inner length: 470 mm
- Max. connectors¹ per cap: 3

Weight

- Weight in air: 11.4 kg / 15.2 kg
- Displacement: 11.6 l

Features

- **Superior corrosion resistance.**
Only specially formulated synthetics material and titanium are in contact with seawater. No electrochemical corrosion when installing to metal frames.
- **No leaking during long term deployments in deep water.**
Our unique design with second internal sealing prevents leaking of water during long term deployments in deep water - a common issue with other synthetics housings available.
- **Tool-less servicing.**
Caps can be opened and closed without using any tools and screws.
- **Cost effective modular design.**
Cap plates can be exchanged and reordered separately at low cost.

Accessories

- Coupling adapter for double-length housing.
- End cap with optical glass port.
- Refillable battery compartment.
- Pressure relief valve with rebound functionality.
- Pressure port for internal sensor mounting.
- Mooring frames, rated 10kN operating load, stainless steel or titanium.

MCH Compact Housing

Operating Depth

Rated and tested to: 750 m / 6,000m

Material

- Outer shell: Fibre reinforced POM / titanium
- Inner shell: High strength aerospace aluminium, hard coated

Dimensions

- Outer diameter: 153 mm
- Outer length: 300 mm / 180mm
- Inner diameter: 110 mm
- Inner length: 179 mm / 82 mm
- Max. connectors¹ per cap: 3

Weight

- Weight in air: 6.1 kg / 6.9 kg
- Displacement: 5.5 l / 3.3 l

Features

- **Superior corrosion resistance.**
Only specially formulated synthetics material and titanium are in contact with seawater. No electrochemical corrosion when installing to metal frames.
- **No leaking during long term deployments in deep water.**
Our unique design with second internal sealing prevents leaking of water during long term deployments in deep water - a common issue with other synthetics housings available.
- **Tool-less servicing.**
Caps can be opened and closed without using any tools and screws.
- **Cost effective modular design.**
Cap plates can be exchanged and reordered separately at low cost.

Accessories

- Refillable battery compartment.
- Pressure relief valve with rebound functionality.
- Pressure port
- End cap with optical glass port.
- Mooring frames, rated 10kN operating load, stainless steel or titanium.



Base titanium housings with develogic HAM.Base hydro acoustic modems and transducers



MCH standard size housings in double-length configuration

Product Specification

MCH Large Housing

Operating Depth

Rated and tested to: 6,000 m

Material

- Outer shell: (Fibre reinforced) POM / titanium
- Inner shell: High strength aerospace aluminium, hard coated

Dimensions

- Outer diameter: 253 mm
- Outer length: 742 mm
- Inner diameter: 182 mm
- Inner length: 650 mm
- Max. connectors¹ per cap: 11

Weight

- Weight in air: 40 kg
- Displacement: 37.3 l

Features

• Superior corrosion resistance.

Only specially formulated synthetics material and titanium are in contact with seawater. No electrochemical corrosion when installing to metal frames.

• No leaking during long term deployments in deep water.

Our unique design with second internal sealing prevents leaking of water during long term deployments in deep water - a common issue with other synthetics housings available.

• Tool-less servicing.

Caps can be opened and closed without using any tools and screws.

• Cost effective modular design.

Cap plates can be exchanged and reordered separately at low cost.

Accessories

- Refillable battery compartment.
- Pressure relief valve with rebound functionality.
- Pressure port for internal sensor mounting.
- Mooring frames, rated 15kN operating load, stainless steel or titanium.

Base Housing

Operating Depth

Rated and tested to: 750 m / 6,000 m

Material

Fibre reinforced POM / Titanium

Dimensions

- Outer diameter: 114 mm
- Outer length: 294 / 564 mm
- Inner diameter: 87 mm
- Inner length: 230 / 500 mm
- Max. connectors¹ per cap: 3

Weight

- Weight in air, shallow water version: 3.5 kg / 5.3 kg
- Weight in air, deep water version: 6.8 kg / 11.9 kg
- Displacement: 3.0 l / 5.8 l

Features

• Superior corrosion resistance.

Only titanium and fibre reinforced POM in contact with sea water.

• Small form factor

• Low weight

• Cost effective design

Accessories

- (Rechargeable) battery pack.
- Pressure relief valve with rebound functionality.
- Pressure port for internal sensor mounting.
- Mooring frames, rated 10kN operating load, stainless steel or titanium.



MCH large and standard size housings, Base titanium housing



MCH large housing with HAM.Base hydro acoustic modem and integrated battery container

¹Subconn® BH or MCBH

Housings

Base Housing

Our base housing features an inner diameter of 87mm with two optional inner usable lengths: 230mm and 500mm. With our base housing you chose a small but very effective solution to operate reliable in depths of 6,000m.

The deep-water-version is completely made of titanium to offer superior corrosion resistance. Our shallow water version features a pressure tube made of resistive fiber-reinforced synthetics.

End caps for interface connectors and transducers are available.

Housings for Special Applications

We approach special application with several composite and titanium-pressure housing solutions.

- Large housing with titanium body and BK7 optical glass port for submergible high resolution digital SLR full frame-camera to operate in up to 6,000m depth
- Housing with titanium body and BK7 optical glass port for submergible photographic high power flash unit to operate in up to 6,000m depth
- Compact antenna housing with titanium body and BK7 optical glass port to operate in up to 6,000m depth

Reliability

All develogic pressure housings convince by superior quality and design.

Our design is a result of a long-term expertise in oceanography. Sophisticated 3D modeling and simulation tools, developed by our engineers, help to manufacture our housings with superior design and persuading quality. Specified operating depths are calculated with a safety factor of 1.5 and are verified in pressing testing facilities.

Principally used materials are titanium, fiber-reinforced synthetics and high strengthened aluminium with surface hard coating. Integral parts made of epoxy-glass resin are also demanded.

Our housings have been proven by our content customers to be rugged and very reliable with no failures. develogic established a satisfied client base during the past years. Due to our precision in developing and assembling we can offer a reliable product. This is why we are able to guarantee a 5-years-full corrosion resistance on all our MCH and base system housings, connectors and acoustic transducers.

Sometimes our wide range of modular MCH and Base housings cannot meet our customers' special mission requirements. Based on our long lasting experience in designing and engineering subsea pressure housings, we are able to provide an optimal solution for your special desires.

Kindly contact us for further information.



Custom titanium housing for deep water 35mm full frame SLR camera system



MCH titanium compact housing for high power flash light



MCH end cap with integrated optical glass port

Accessoires

We offer a large range of accessories to customize our pressure housings to your needs. Individual solutions are available upon request.

Battery Containers

Our refillable battery containers are for use our MCH composite pressure housings. Due to their flexible mechanical and electrical design, all MCH battery packs can be customized to fit a large variety of applications.

Our battery containers are to be mounted onto the MCH standard, compact and large housing caps. Our pressure housings can therefore be transformed into flexible external power supply for your instruments.

Battery containers are made of epoxy-glass resin, lightweight anodized aluminium and engineering synthetics. This is why they do not add much more weight and ensure an easy servicing. Your big advantage is that you are no longer dependent on customized battery packs. Reasonable off-the-shelf lithium, alkaline or NiMH battery cells can be used with our flexible battery cells.

Mooring Frames

Inline mooring frames are available for all our MCH and base system housings. Those are either made of 1.4571 stainless steel with additional aluminium anodes or made of titanium. Compatible shackles of bow shackles with safety pin and high strength synthetic sleeves are optionally available.

Safe working load (SWL) for our standard size and compact MCH frames is 10kN. Our large MCH frame features a SWL of 15kN.

Heavy-duty inline frames with increased SWL, customized housing and transducer mounting adapters are available upon request.

Optical Glass Port

A titanium end cap with BK7 optical glass port is available for our MCH standard size and compact housings. The reliable operating depth is 6,000m.

The optical glass port allows convenient integration of optical instruments into our MCH pressure housings. Those can be videos, still cameras, lights and flash lights, RF antennas and satellite transponders..

Housing Coupling Adapter

Our standard MCH housing can be coupled into a double-lengths housing by using our optional composite adapter (cable lead-through with an inner diameter of 66mm).



Large MCH battery container for 133x D-size cells, standard size MCH battery container with end cap (front).



MCH housing coupling adapters with dual battery containers

Modular Pressure Housings



MCH mooring frame, optional set of bow shackle and sleeves



Titanium pressure relief valves with rebound functionality

INFORMATION

develogic GmbH
Eiffestr. 598
20537 Hamburg
Germany

PHONE: +49 (0)40 982625-13
FAX: +49 (0)40 982625-22
E-MAIL: info@develogic.de

www.develogic.de



Housings

Pressure Relief Valve

Our pressure relief valve with rebound functionality offers a maximum of safety. Reliable operating depth is 6,000m.

In case of overpressure the valves open immediately. Unlike in most commercially available solutions, our valve closes after pressure compensation. Thereby your instruments are protected against incoming water.

Pressure Port

A titanium pressure port allows assembling an internal pressure sensor. A pressure port can be easily bolt on any of our end caps.

Our standard and large MCH houses can be equipped with a Paroscientific 410K-101 precision pressure sensor (incl. dedicated internal mounting adapters). Upon request we assemble various other sensors into your pressure port.

Please contact us!