



# TYPE APPROVAL DESIGN CERTIFICATE

Certificate No:  
**TAP00002RN**  
Revision No:  
**1**

## This is to certify:

**That the Water Treatment Units**

with type designation(s)  
**HM45, HM60, HM100, HM130, HM 150, HM 190, HM Custom**

Issued to  
**Hydrophath Technology Limited**  
**Nottingham, United Kingdom**

is found to comply with  
**DNV rules for classification – Ships Pt.4 Ch.6 Piping systems**  
**DNV rules for classification – Ships Pt.4 Ch.8 Electrical installations**

## Application :

**Prevention and removal of limescale and biofouling in water systems, typically in heat exchangers and fresh water generators.**

**Max. working temp.:** up to +55°C (environment)  
**Design pressure:** not applicable.

Issued at **Hamburg** on **2023-10-13**

This Certificate is valid until **2028-09-25** .

DNV local unit: **UK & Ireland CMC & VMC**

for **DNV**

Approval Engineer: **Hagen Markus**

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**Sven Klinger**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



## Product description

Electronic water conditioners for preventing of limescale and biofouling in piping systems.

### Main (electrical) components:

- Hydropath Transducer
- Spike inhibitor / surge protector / In Box
- Connection cable, Hydropath specification: SOOW

Power supply: 100-230 V AC / 50-60 Hz  
Degree of protection: IP 68 (Transducer)  
IP 66 (In box)

### Environmental conditions:

Operating temperature: -20°C up to +55°C

## Application/Limitation

Prevention and removal of limescale and biofouling in marine vessel water systems, typically in heat exchangers and freshwater generators.

### Limitation

This Type Approval Design Certificate is not valid for designs, components, equipment, systems or products which are subject to classification by DNV.

This Type Approval covers design(s) only. i.e. the Type Approval is not valid for the final product but may be used as basis for obtaining a product certificate.

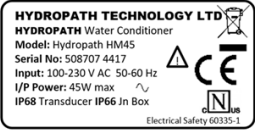
## Type Approval documentation

**Tests carried out**

- Tests for protection against water BS EN 60529: 1992 +A2: 2013
- EMC tests EN 55014-1, EN 55014-2, EN 61000 series, EN 62233
- IEC 60335-1 Safety of household and similar electrical appliances

**Marking of product**

The products are marked with a name plate as follows:

| Scope                   | Example   |
|-------------------------|---|
| manufacturer name       |  |
| model name              |   |
| serial number           |   |
| power supply ratings    |   |
| IP degree of protection |   |

**Periodical assessment**

Not applicable.

**End of certificate**