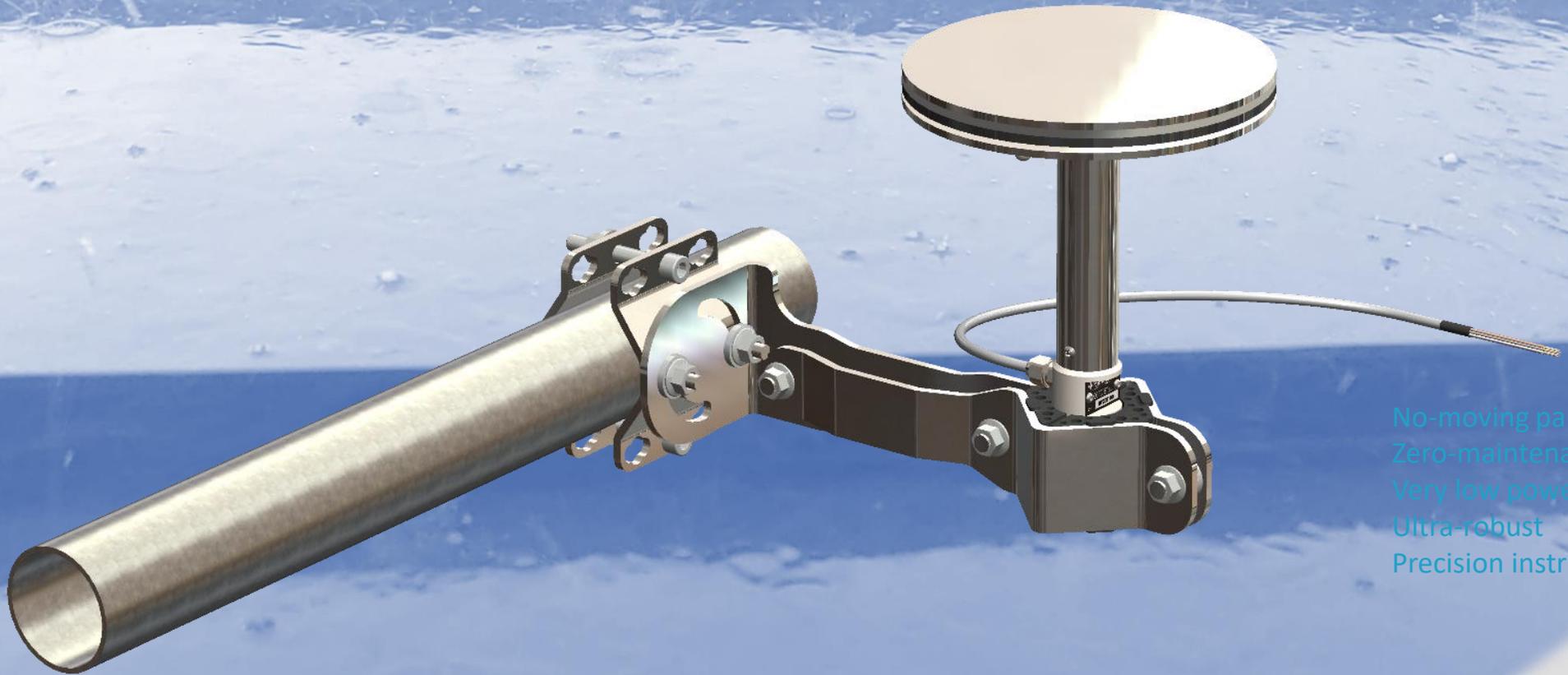


HaiFlow

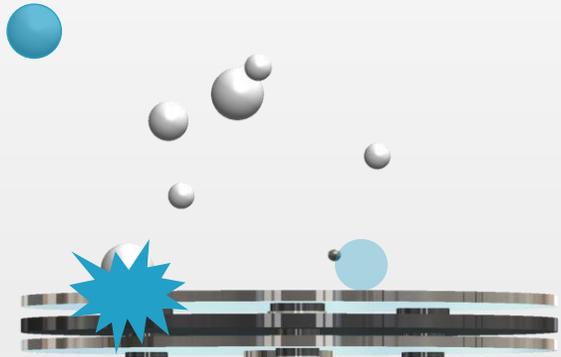
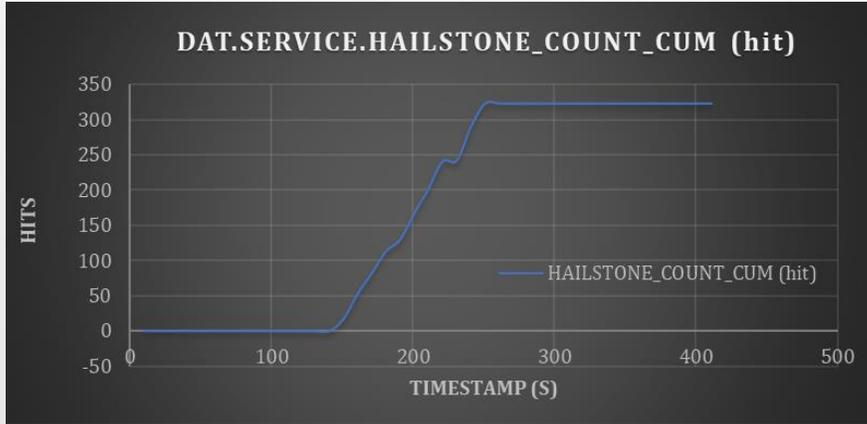
specialized hail surveillance sensor



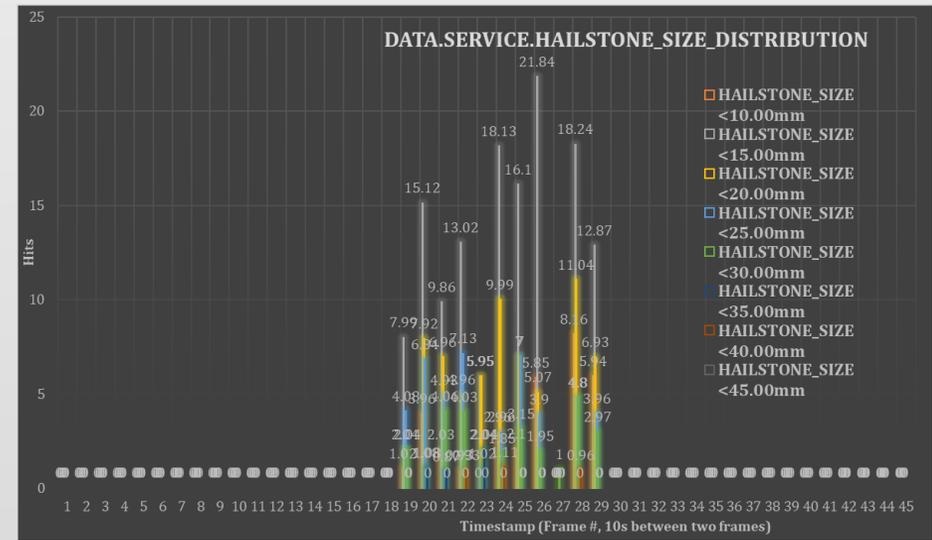
No-moving parts
Zero-maintenance
Very low power
Ultra-robust
Precision instrument

Kinetics of hail

counts hailstones



determines hailstone size



High-resolution traceability of massive damages

Solar plants



Wind farms



Crops

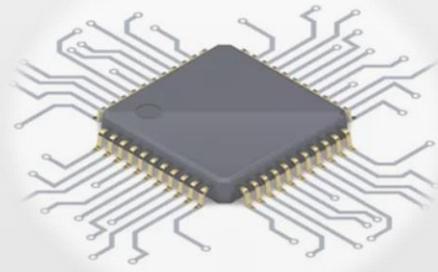
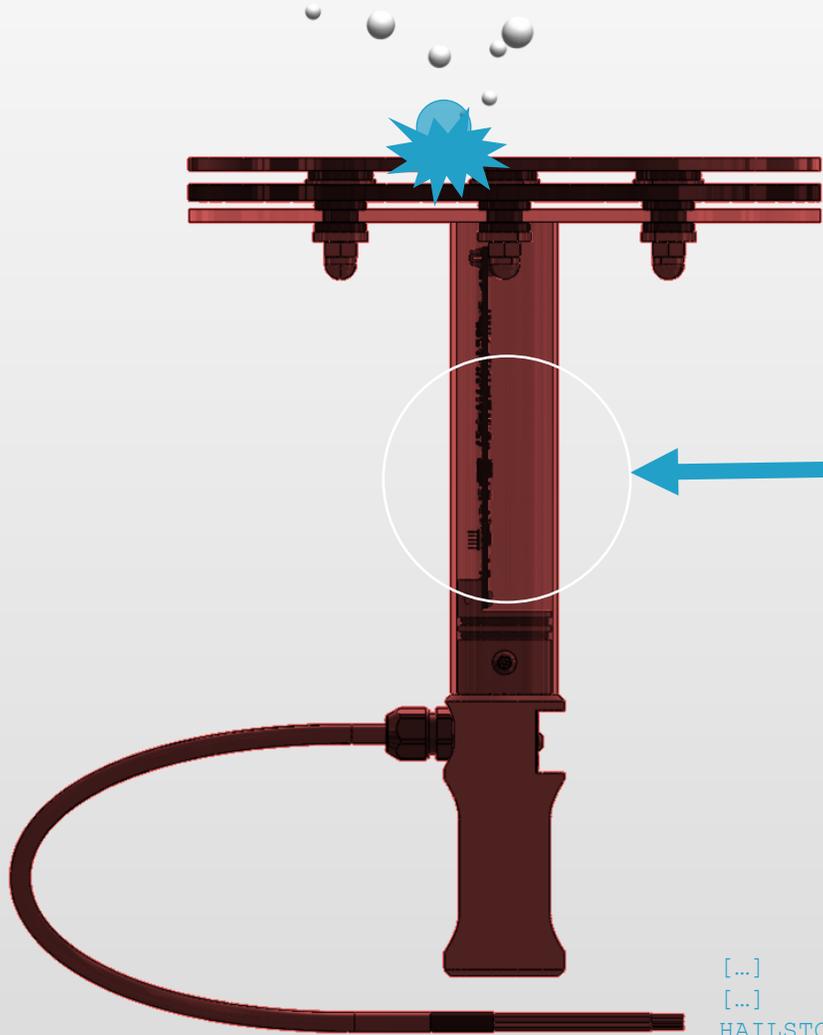


Car parks

Buildings

...

Smart instrument

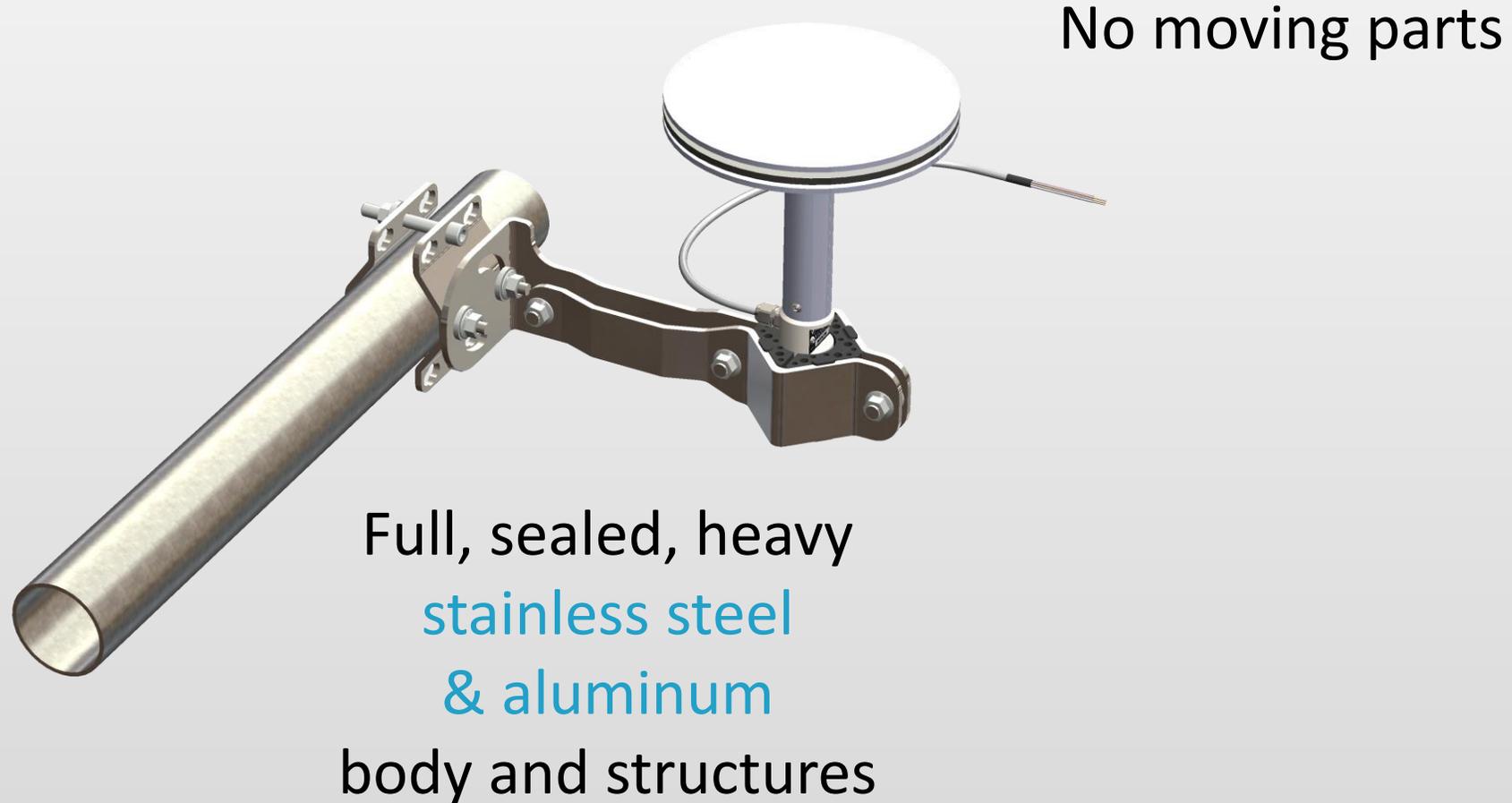


ultra-dedicated, real-time,
high-resolution,
very-low power
embedded processing



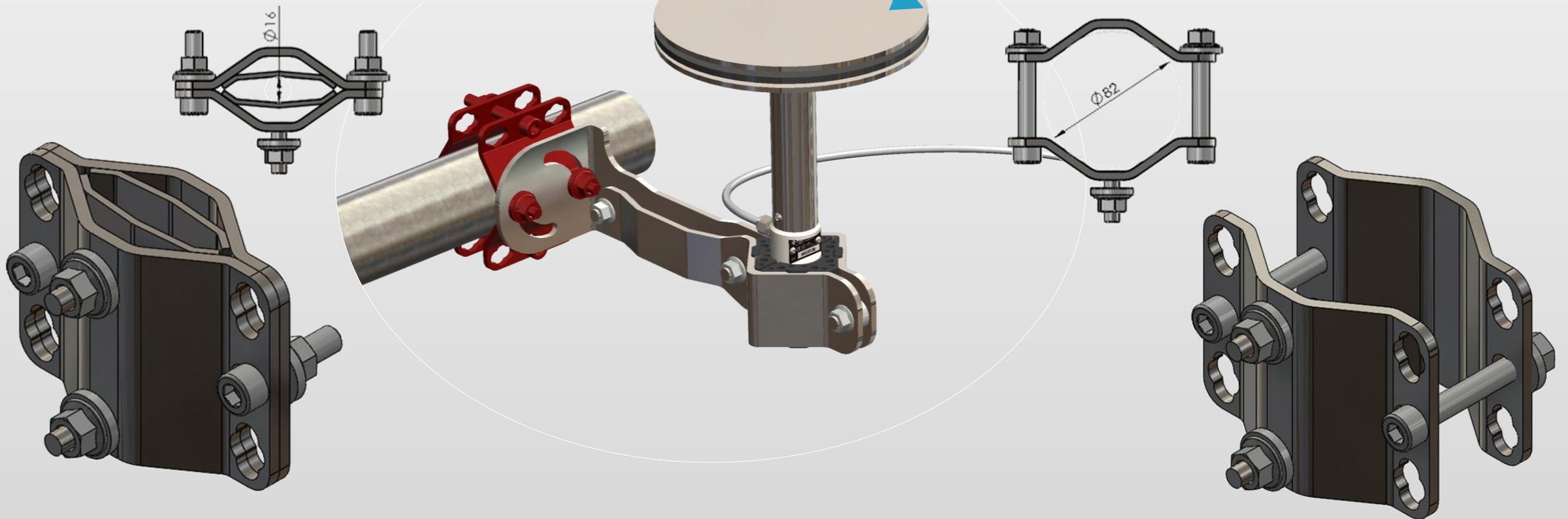
[...]
[...]
HAILSTONE;9322;hit;7;mm;%;10;0;15;0;20;0;25;0;30;0;35;14;40;14;45;29;50;29;55;14;60;0;65;0;70;0;75;0;99;0
[...]
[...]
[...]
[...]
[...]

Ultra robust & zero-maintenance instrument

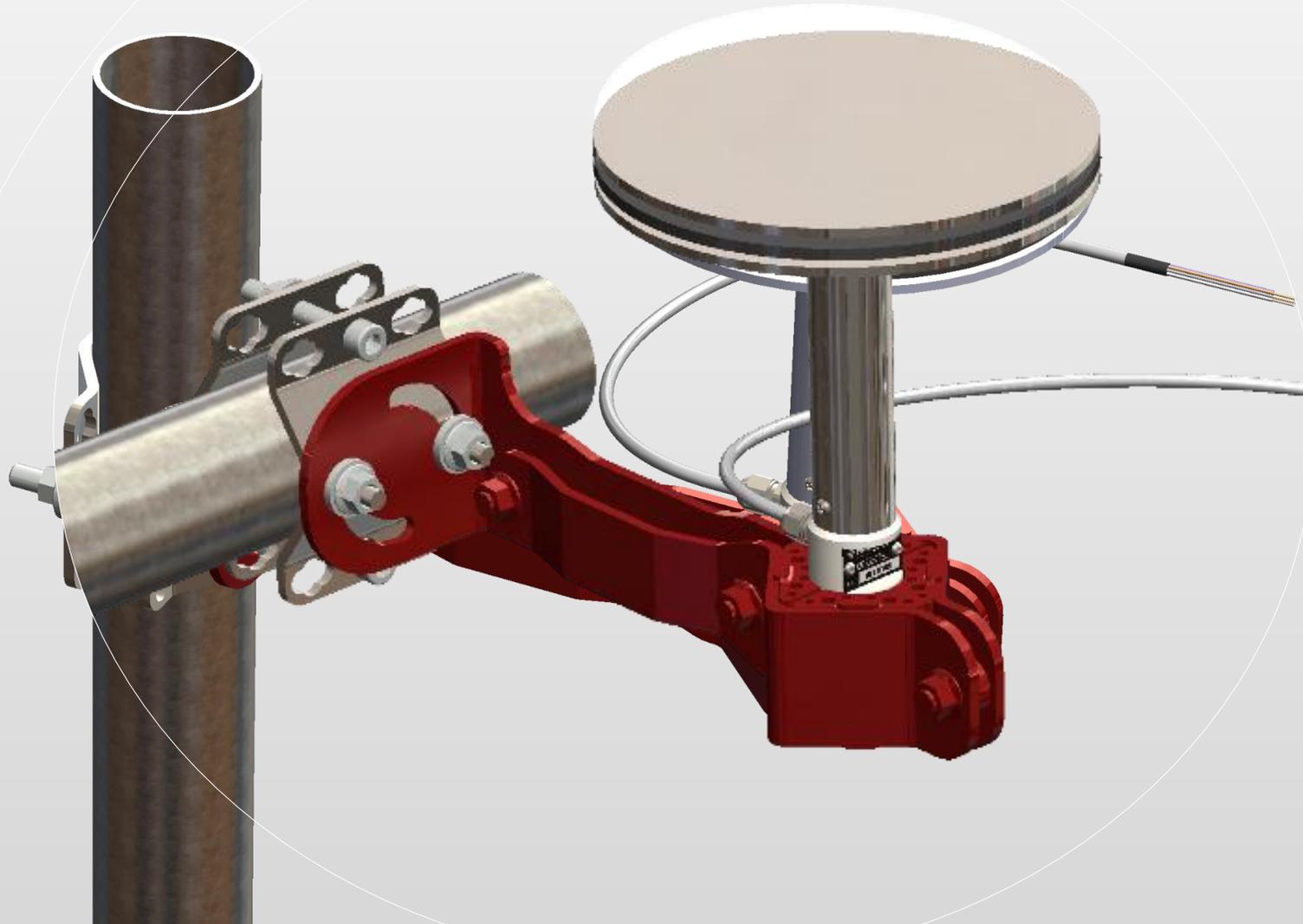


Universal V-bracket mounting

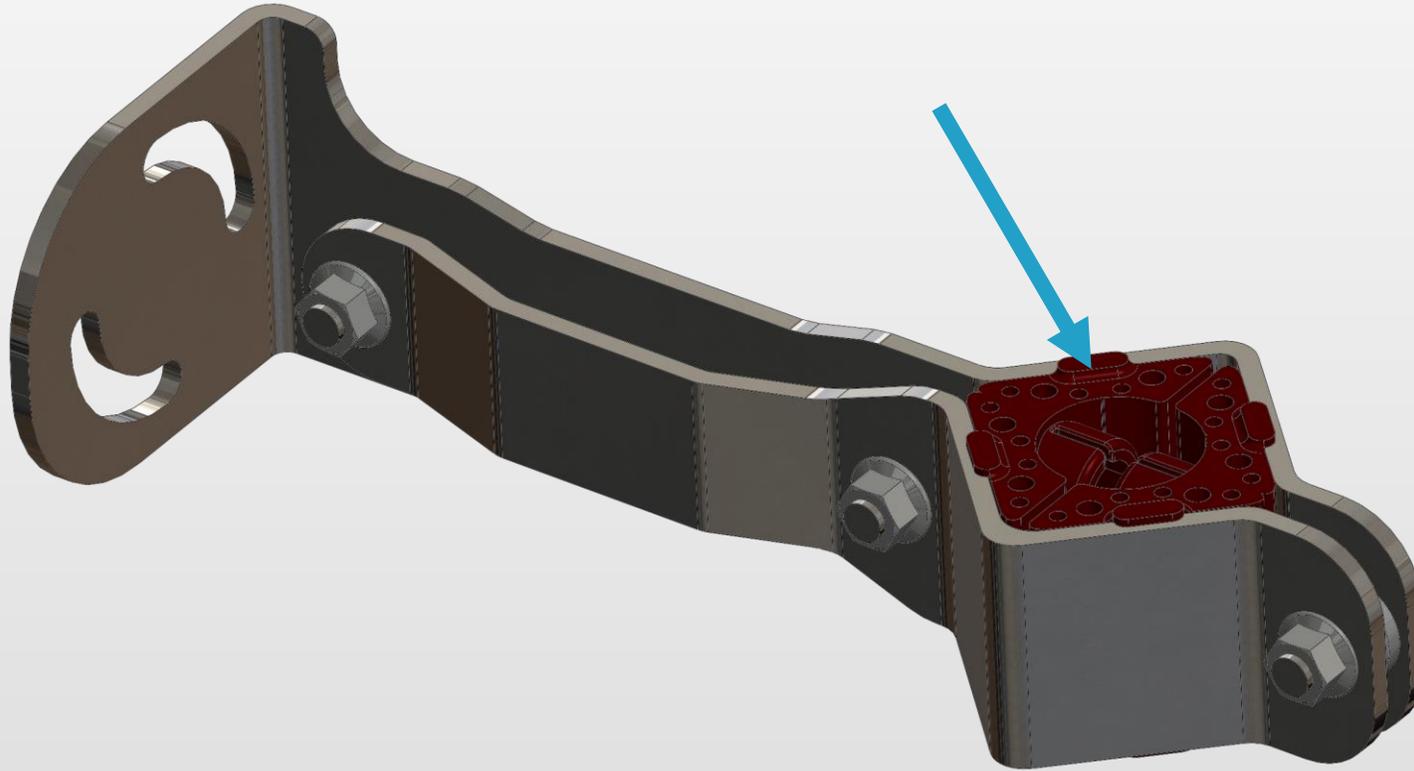
Expandable
from 16 mm
to 82 mm



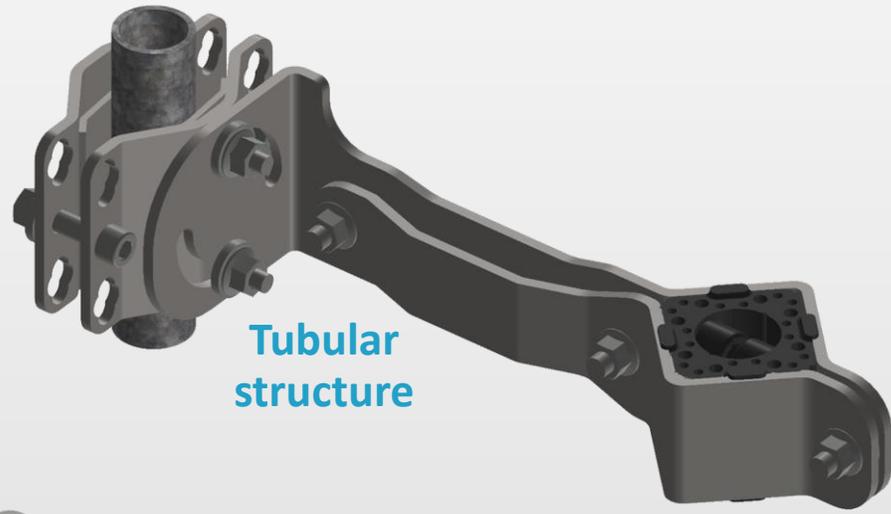
Universal 360° tiltable arm



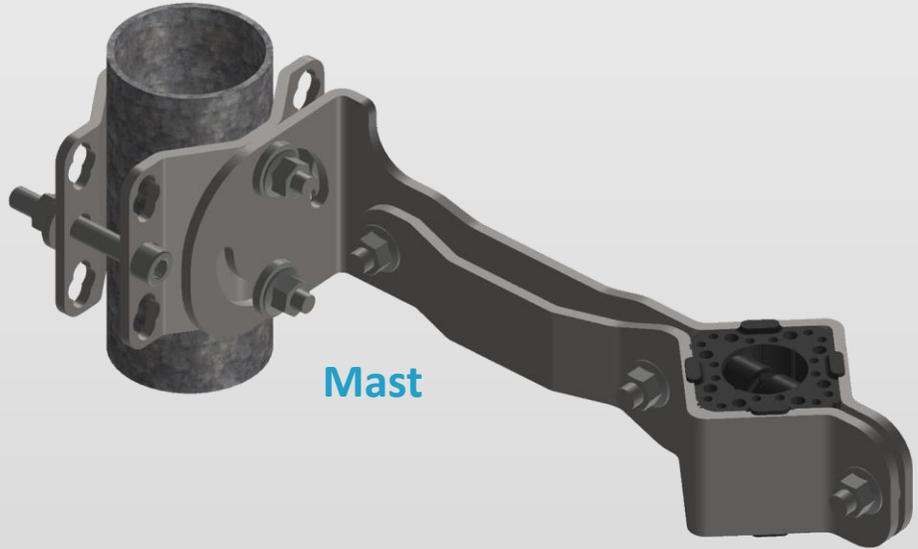
Extreme long-life vibration



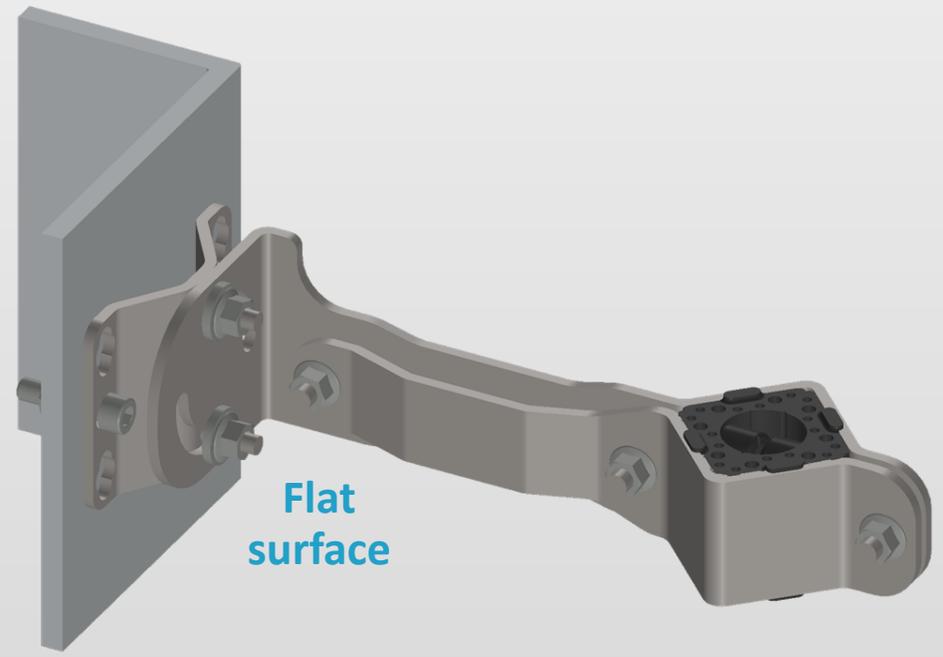
Compatible with any type of supporting structure



Tubular structure

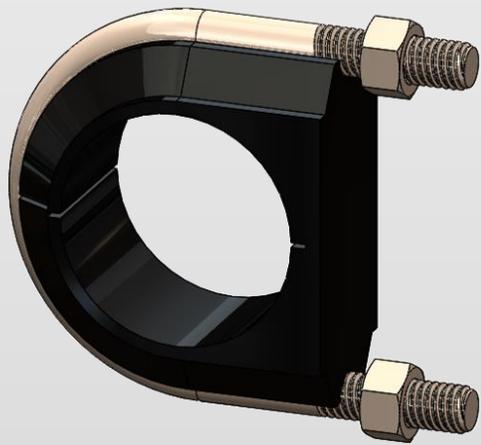


Mast

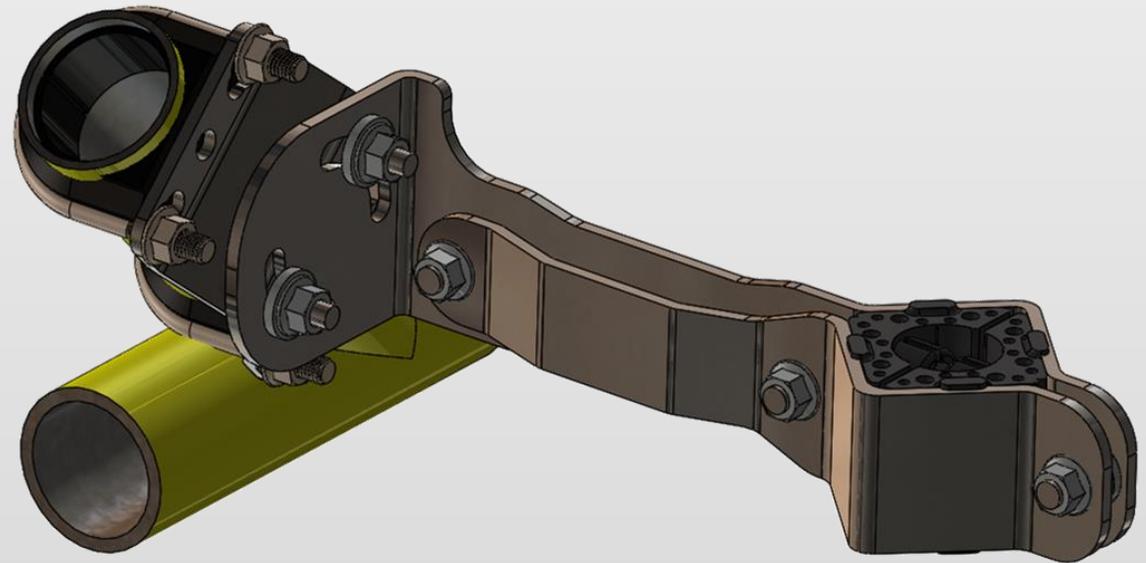
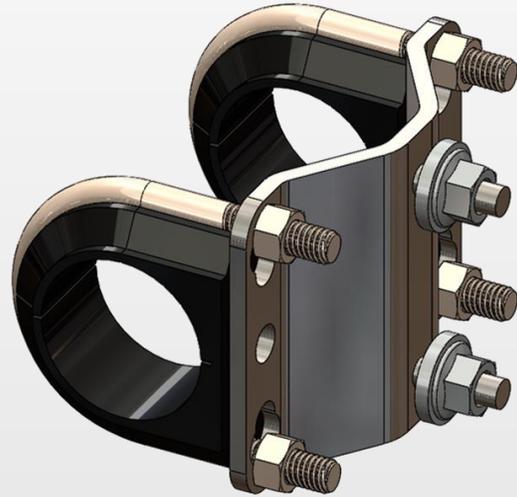


Flat surface

... even standard U-bolt fastener

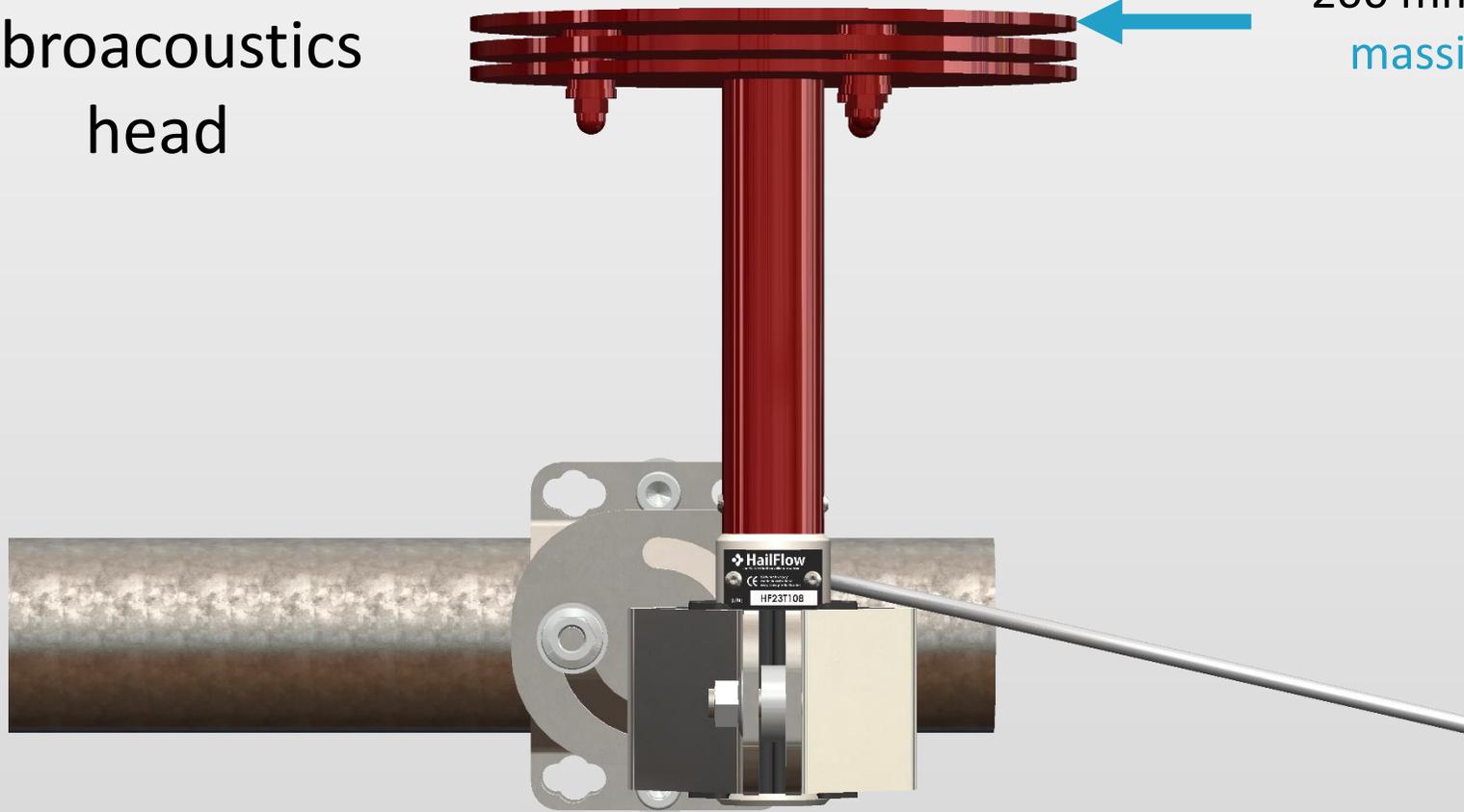


U-Bolt Fastener example
(Ref. 50606030)
not provided



Lifetime calibrated sensing head

Suspended
vibroacoustics
head



200 mm diameter & 4 mm thick
massive stainless-steel plate

Counting hailstones

The sensor automatically counts every individual impact even up to 25 impacts per second



Size of hailstones



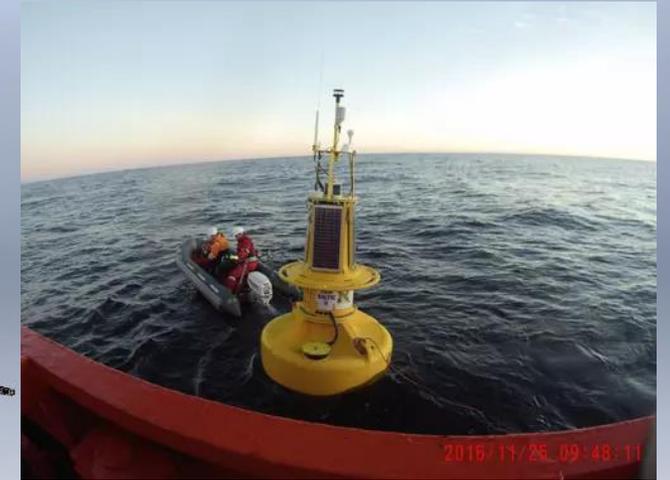
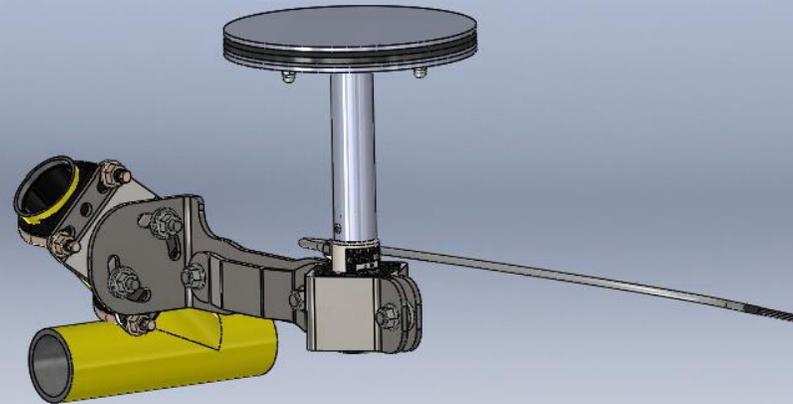
Sizes of the hailstones are classified into **15 classes** of diameters, ranging from **0.5 to 8 cm**

From there the **kinetic energy** can be deduced from various precipitation models

Sensor and mounting kit are full 316L certificated stainless steel resistant to offshore applications or other extremely harsh environments

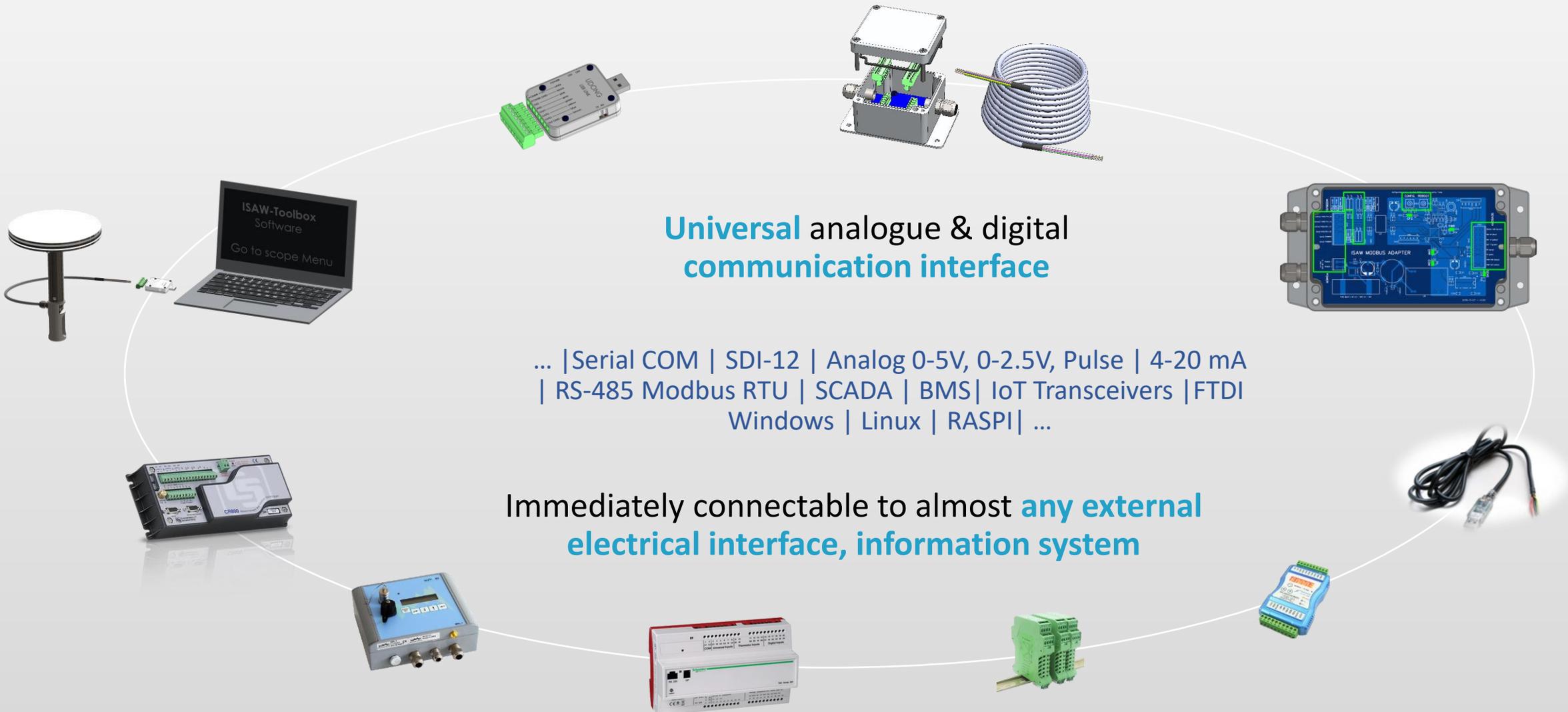


Courtesy of ORSTED Denmark Farm

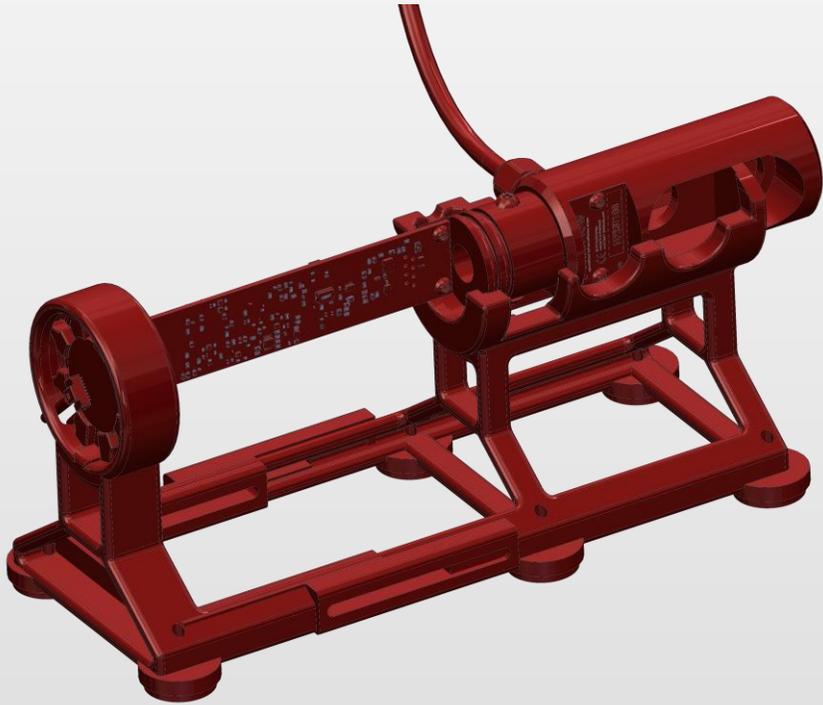


Courtesy of AXYS Metocean Buoy

Interfacing the sensor



Traceability and calibration declaration



Individual factory
calibration



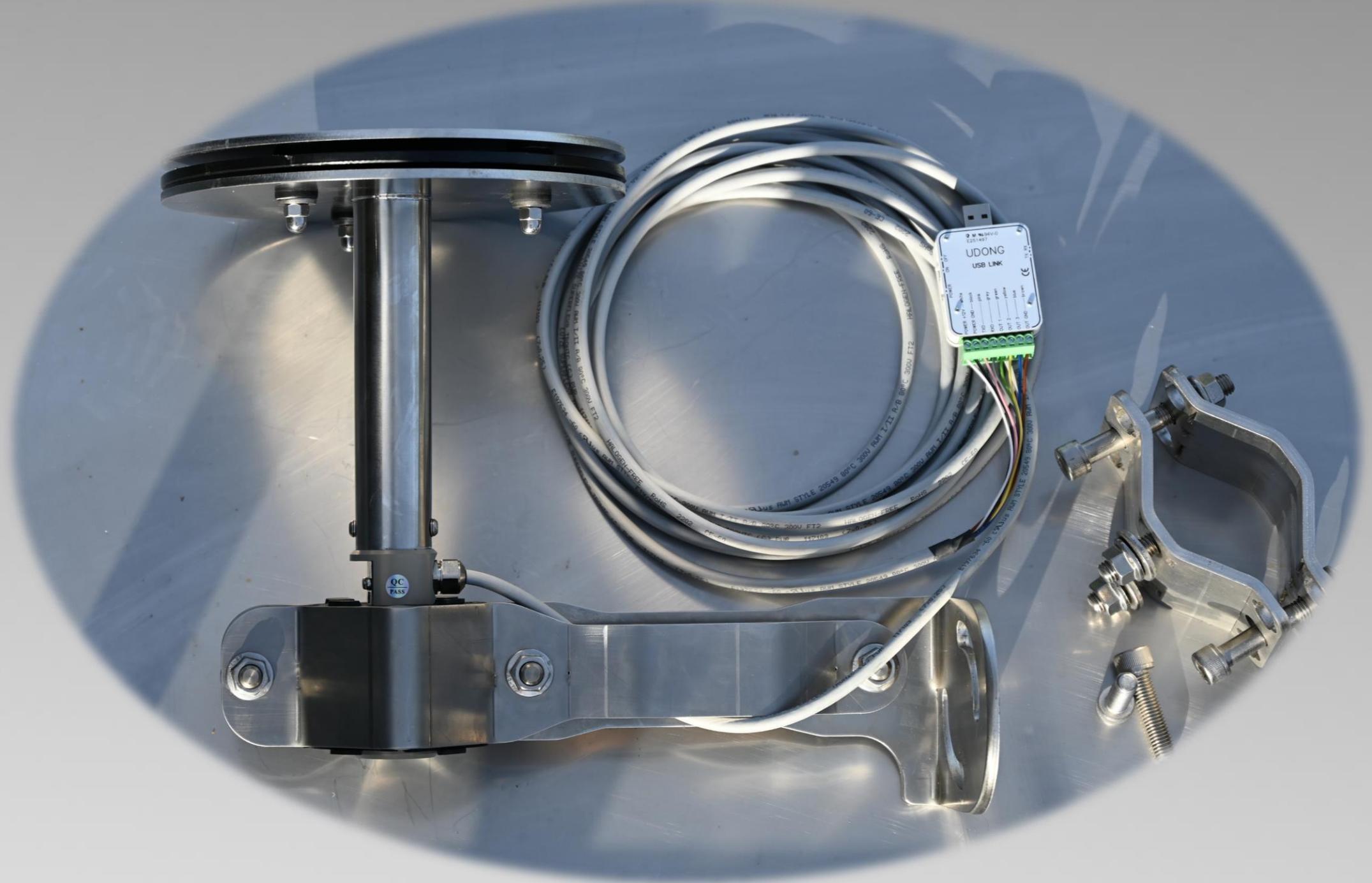
Calibration certificate
provided for each unit

Fast & easy field check

Elastic shock impact:

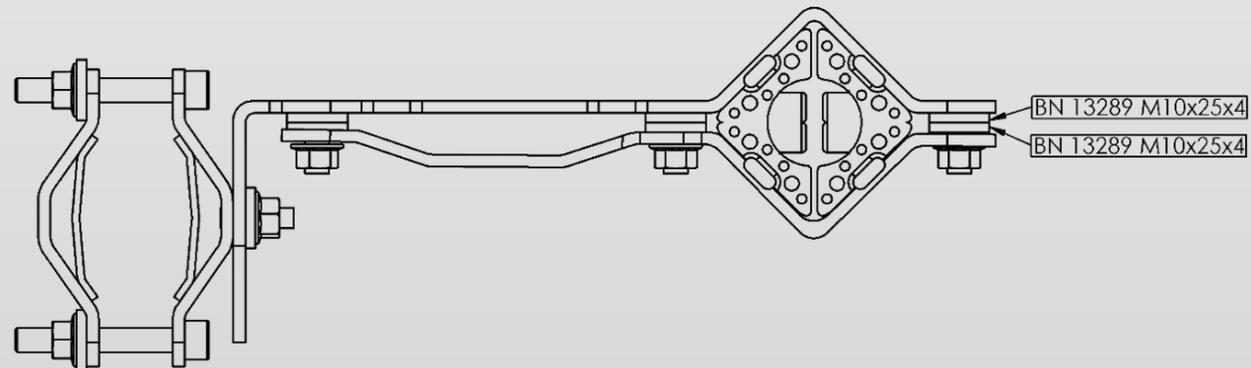
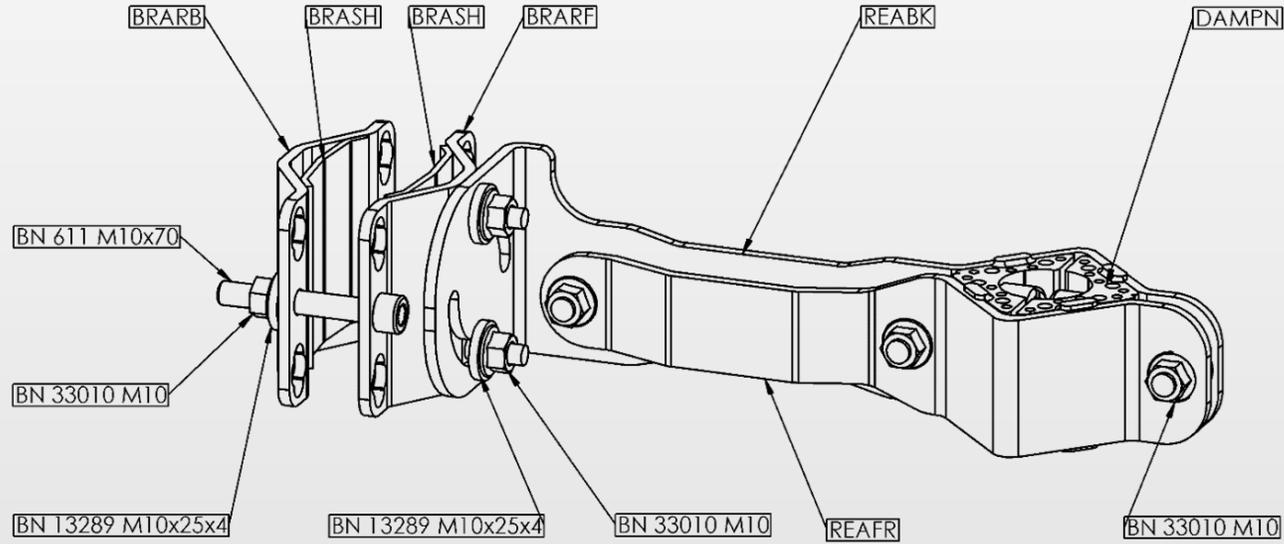
The **sensor (and reading chain)** can be checked at any moment by **gently tapping with your fingertips** or by dropping a calibrated ball







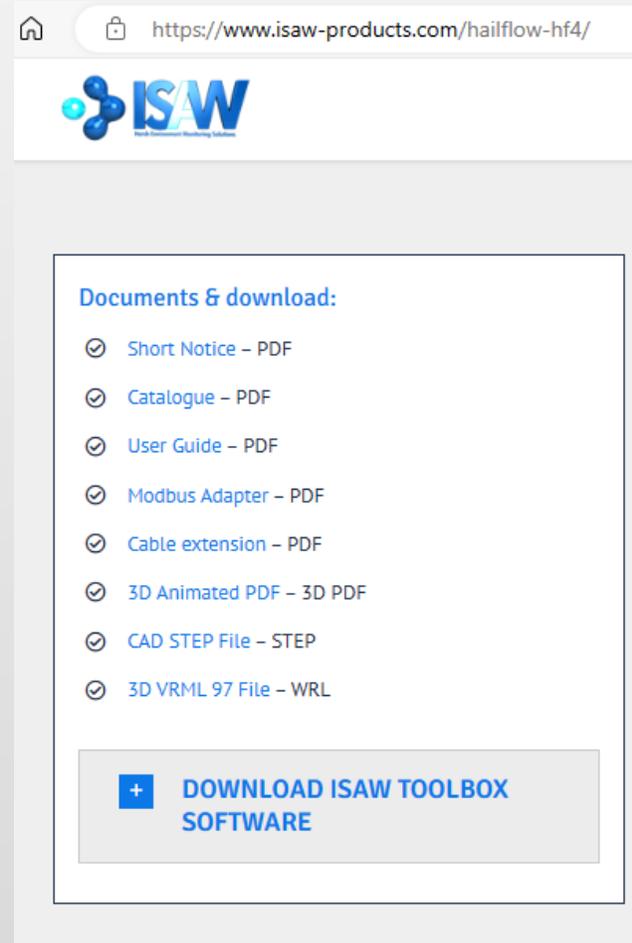
Repairability: very long-term availability of spare parts



Integration in your project

All the necessary resources are available on **one** online page

Documents
3D CAD
Utility software



The screenshot shows a web browser window with the URL <https://www.isaw-products.com/hailflow-hf4/>. The ISAW logo is visible at the top. Below the logo, there is a section titled "Documents & download:" containing a list of resources, each with a checkmark icon:

- Short Notice - PDF
- Catalogue - PDF
- User Guide - PDF
- Modbus Adapter - PDF
- Cable extension - PDF
- 3D Animated PDF - 3D PDF
- CAD STEP File - STEP
- 3D VRML 97 File - WRL

At the bottom of the list, there is a button with a plus sign icon and the text "DOWNLOAD ISAW TOOLBOX SOFTWARE".



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