

The image features a RainFlow precipitation monitoring sensor, a precision instrument with a polished metal finish. It consists of a long, cylindrical tube that tapers slightly towards the end, connected to a complex mounting bracket. This bracket is attached to a spherical, reflective metal dome. A thin cable extends from the side of the dome. The entire sensor is positioned over a circular area of dark, textured ground, possibly a field or forest floor, with small, dark, pointed objects scattered across the surface. The background is a soft, out-of-focus white.

RainFlow

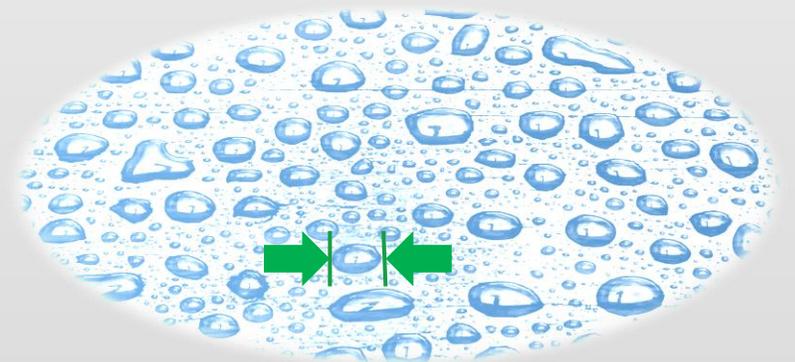
precipitation monitoring sensor

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

Specialized rain monitoring sensor

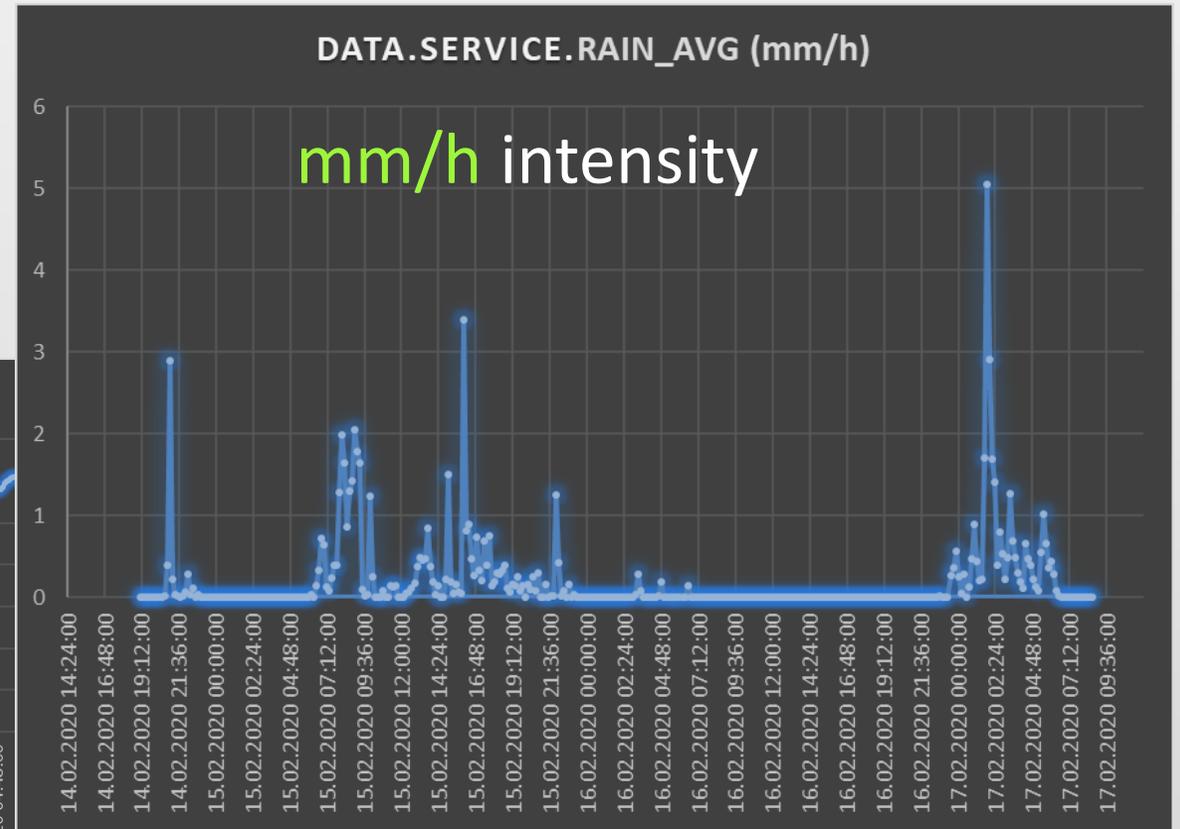
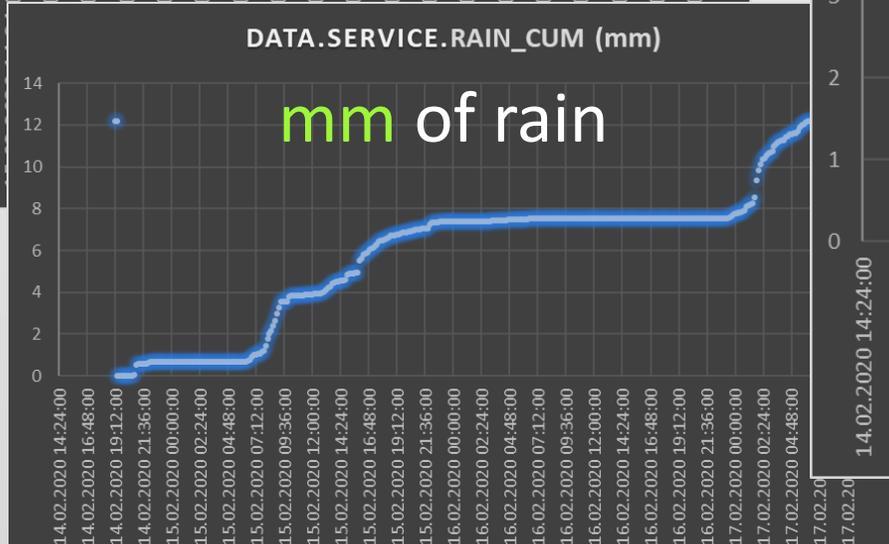
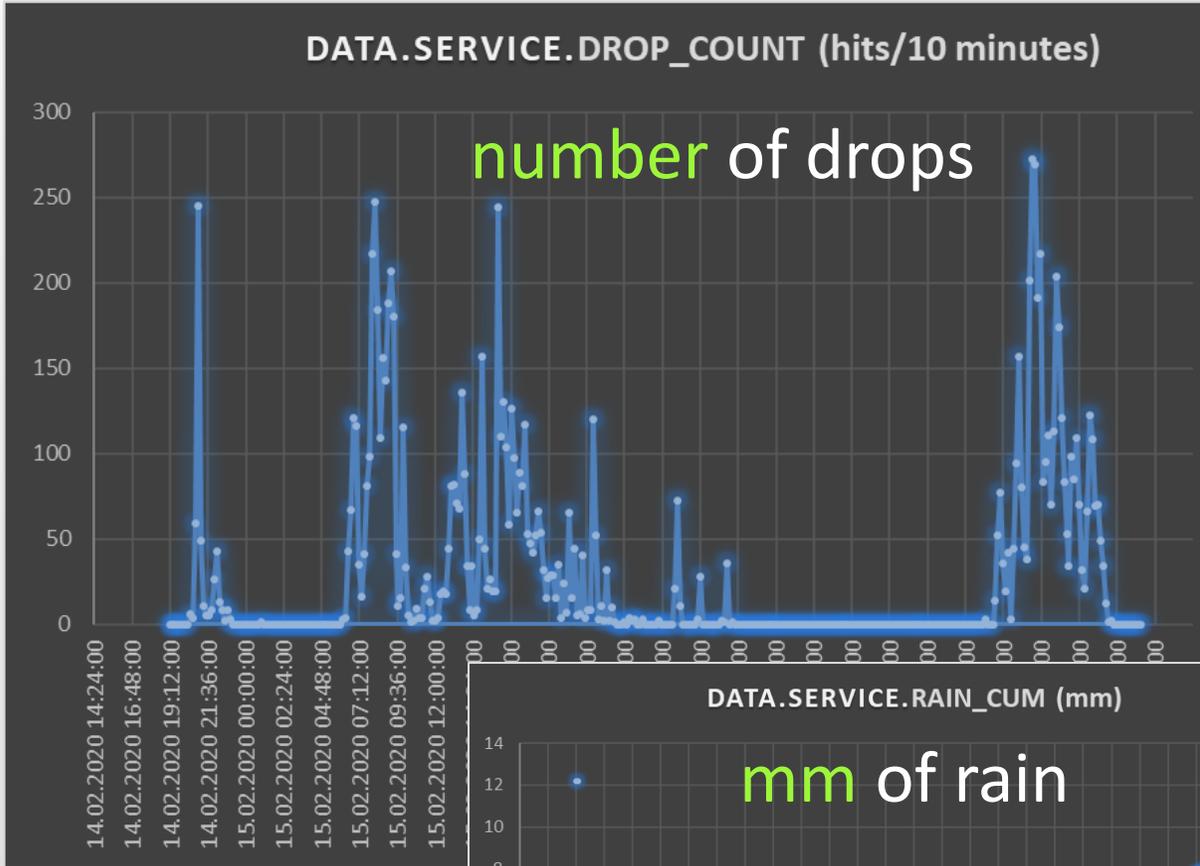


Rain intensity



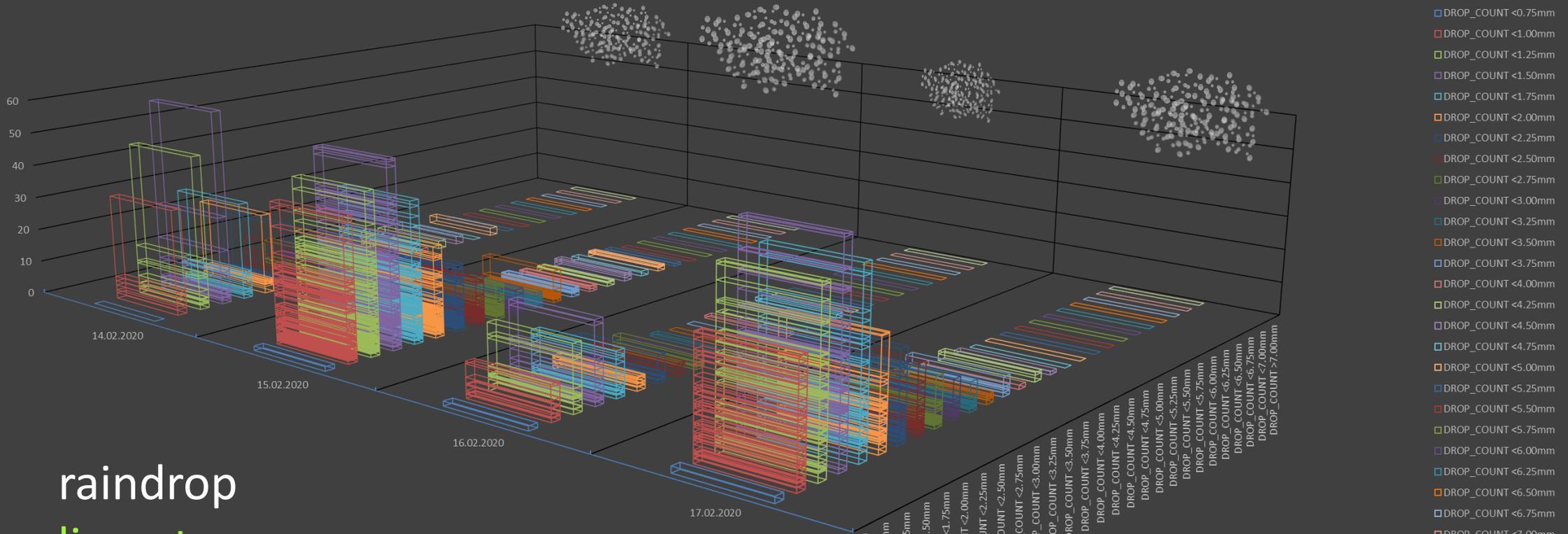
Size of raindrops

Measures rain intensity



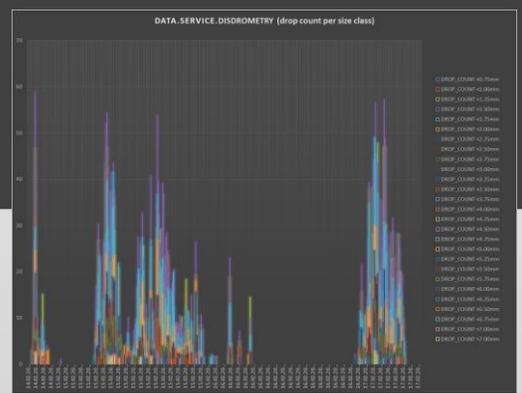
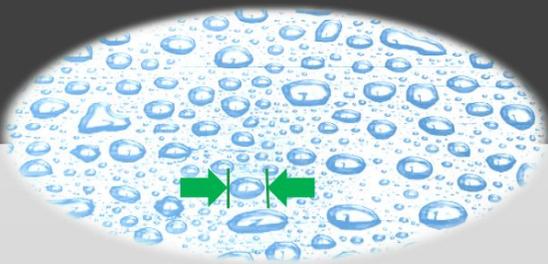
Disdrometry: structure of the rain episode

DATA.SERVICE.DAILY.DISDROMETRY (drop count per size class)



- DRO_COUNT < 0.75mm
- DRO_COUNT < 1.00mm
- DRO_COUNT < 1.25mm
- DRO_COUNT < 1.50mm
- DRO_COUNT < 1.75mm
- DRO_COUNT < 2.00mm
- DRO_COUNT < 2.25mm
- DRO_COUNT < 2.50mm
- DRO_COUNT < 2.75mm
- DRO_COUNT < 3.00mm
- DRO_COUNT < 3.25mm
- DRO_COUNT < 3.50mm
- DRO_COUNT < 3.75mm
- DRO_COUNT < 4.00mm
- DRO_COUNT < 4.25mm
- DRO_COUNT < 4.50mm
- DRO_COUNT < 4.75mm
- DRO_COUNT < 5.00mm
- DRO_COUNT < 5.25mm
- DRO_COUNT < 5.50mm
- DRO_COUNT < 5.75mm
- DRO_COUNT < 6.00mm
- DRO_COUNT < 6.25mm
- DRO_COUNT < 6.50mm
- DRO_COUNT < 6.75mm
- DRO_COUNT < 7.00mm
- DRO_COUNT > 7.00mm

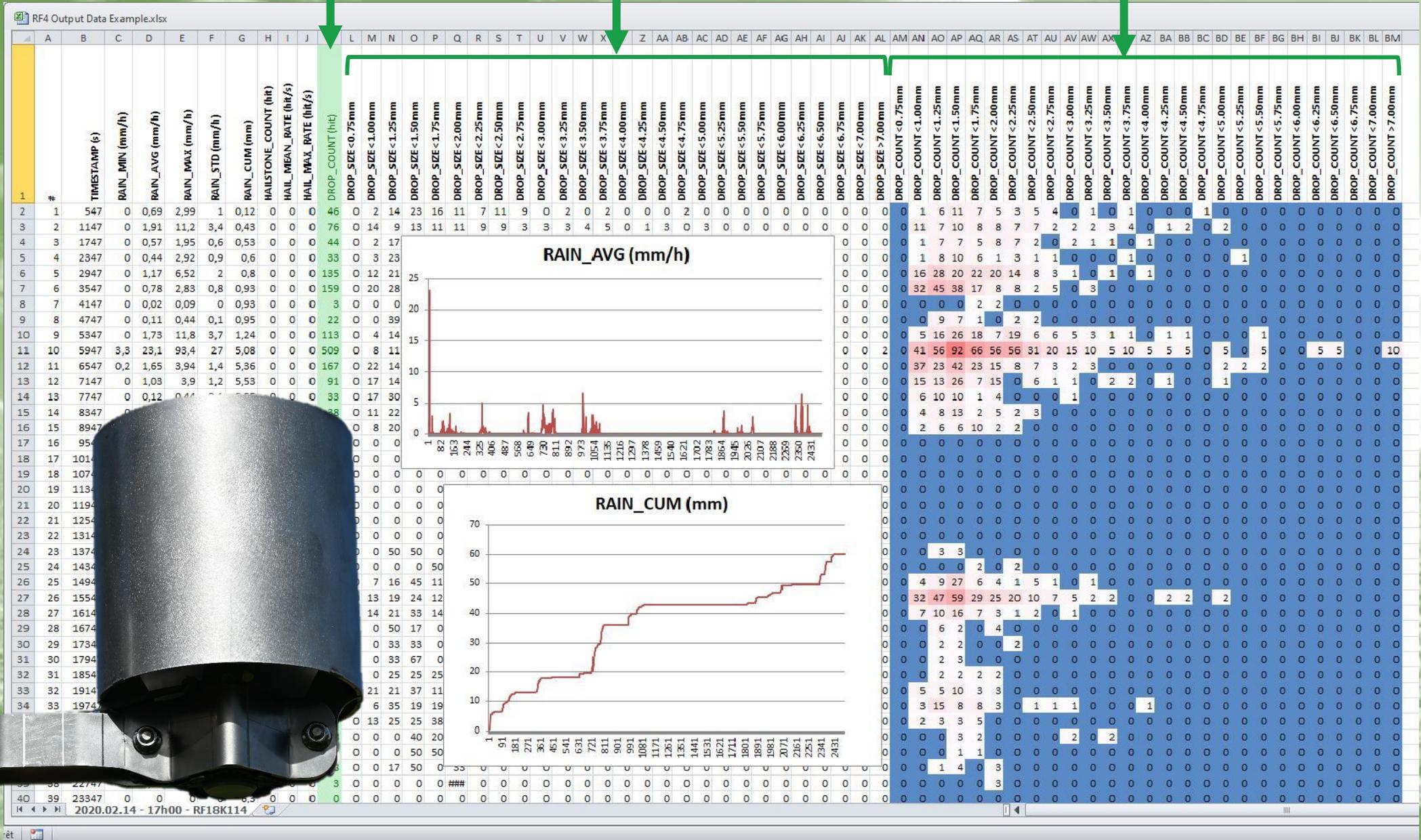
raindrop diameters



total number of hits

% of hits per size class

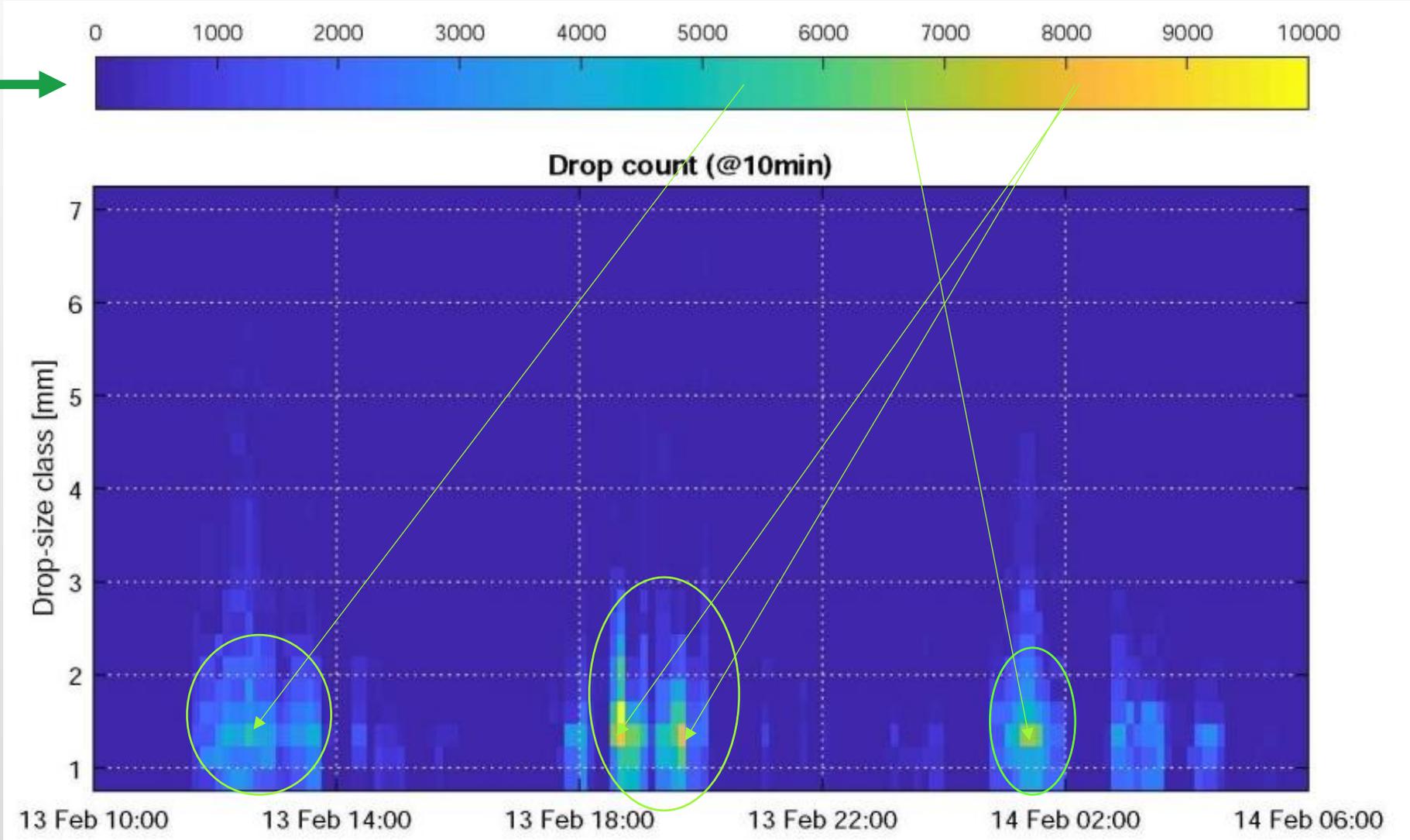
number of drops per size class



number
of drops

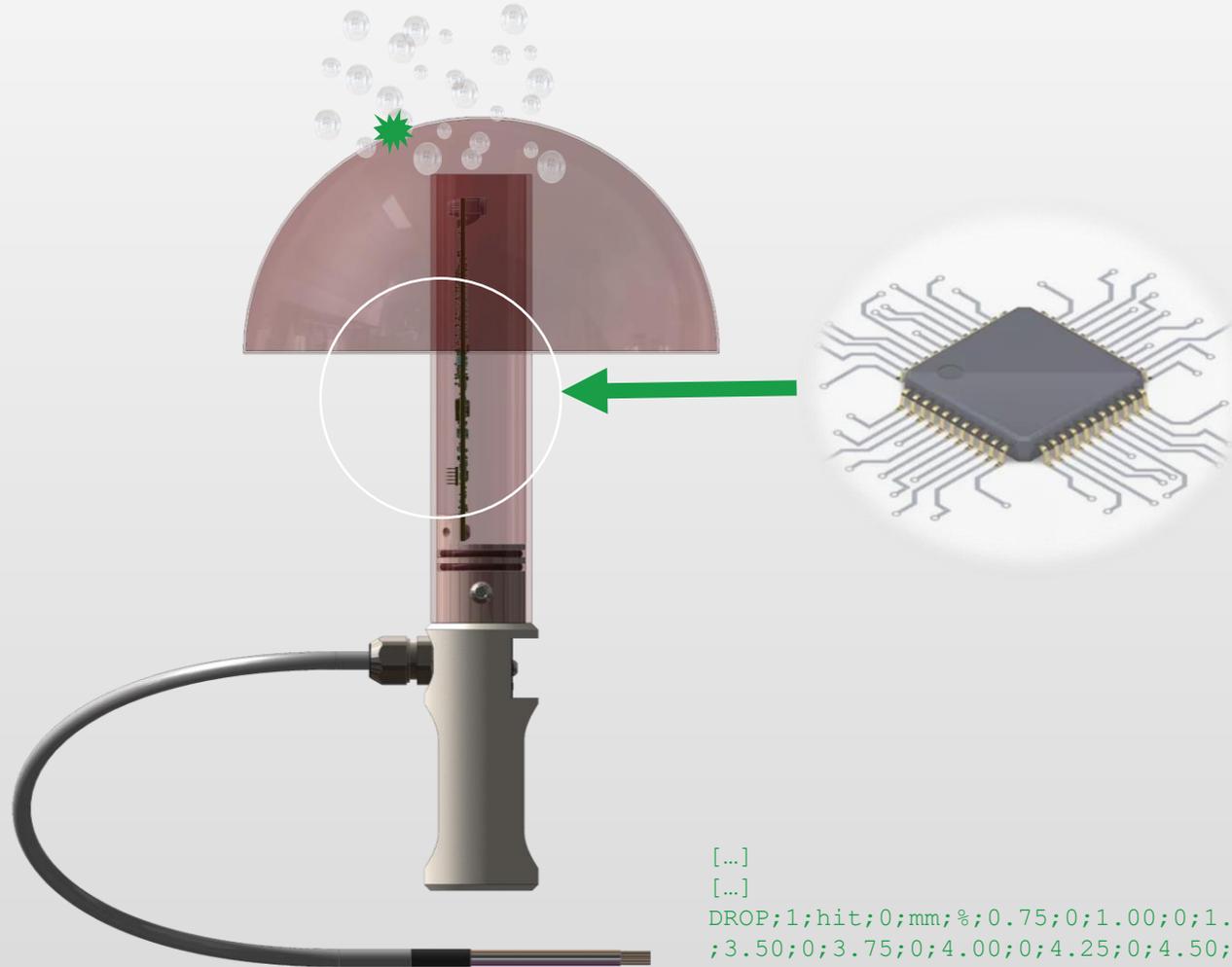


size distribution
of drops



time history

Smart instrument



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



```
[...]  
[...]  
DROP;1;hit;0;mm;%;0.75;0;1.00;0;1.25;0;1.50;0;1.75;0;2.00;0;2.25;0;2.50;0;2.75;0;3.00;0;3.25;0  
;3.50;0;3.75;0;4.00;0;4.25;0;4.50;0;4.75;0;5.00;0;5.25;0;5.50;0;5.75;0;6.00;0;6.25;0;6.50;0;6.  
75;0;7.00;0;99.00;0  
[...]  
[...]  
[...]
```

Ultra robust & zero-maintenance instrument

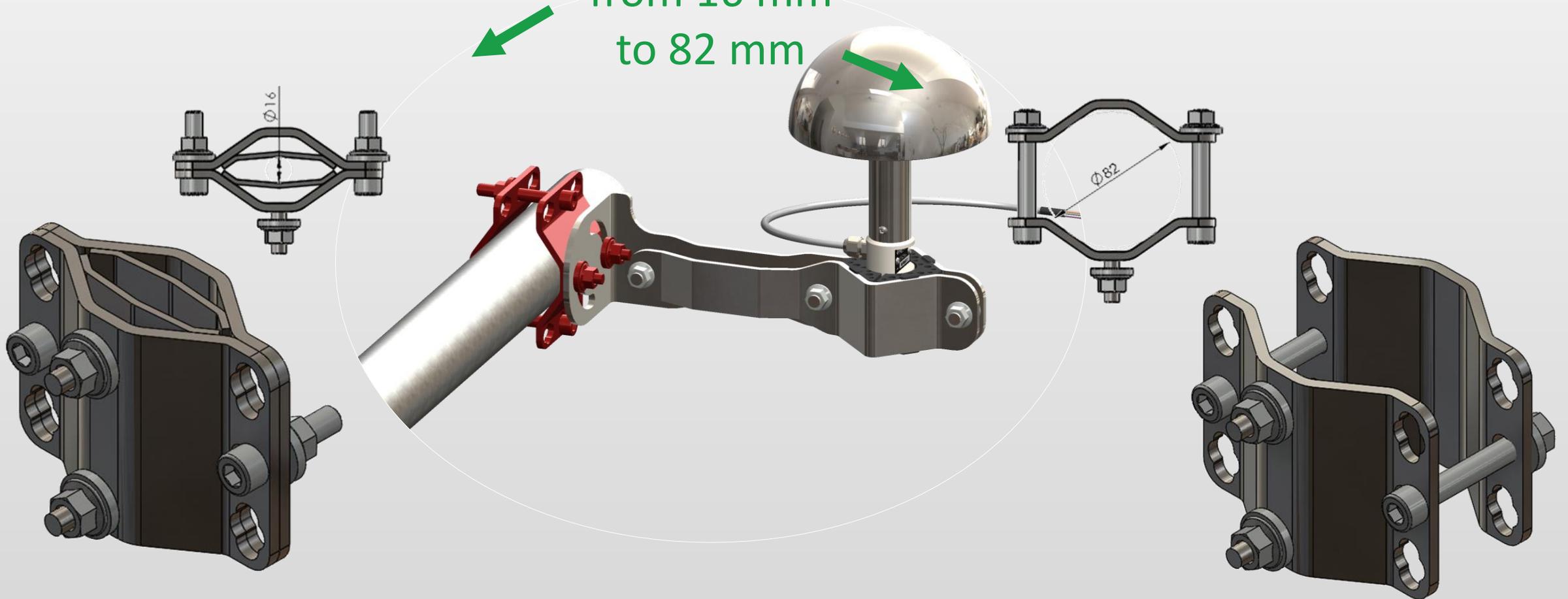
No moving parts



Full, sealed, heavy
stainless steel
& aluminum
body and structures

Universal V-bracket mounting

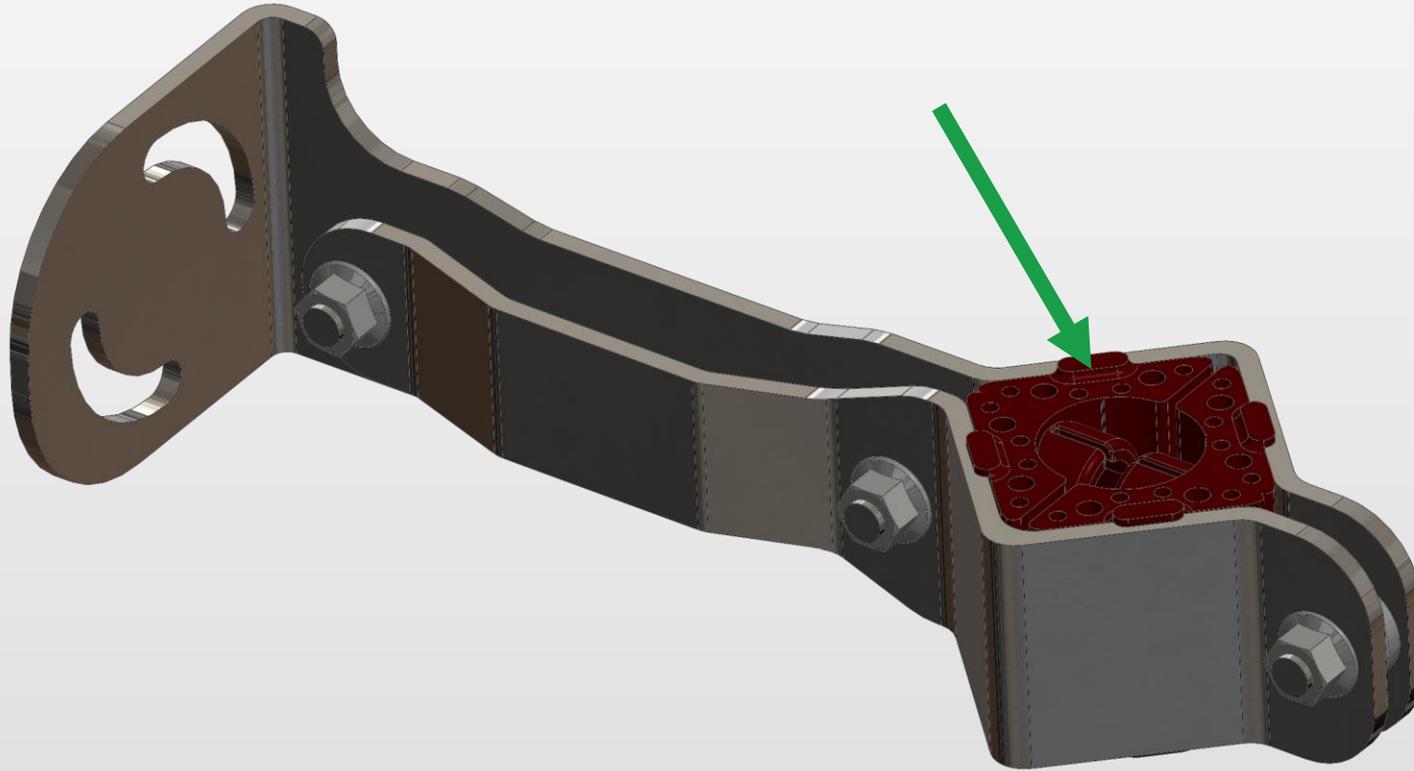
Expandable
from 16 mm
to 82 mm



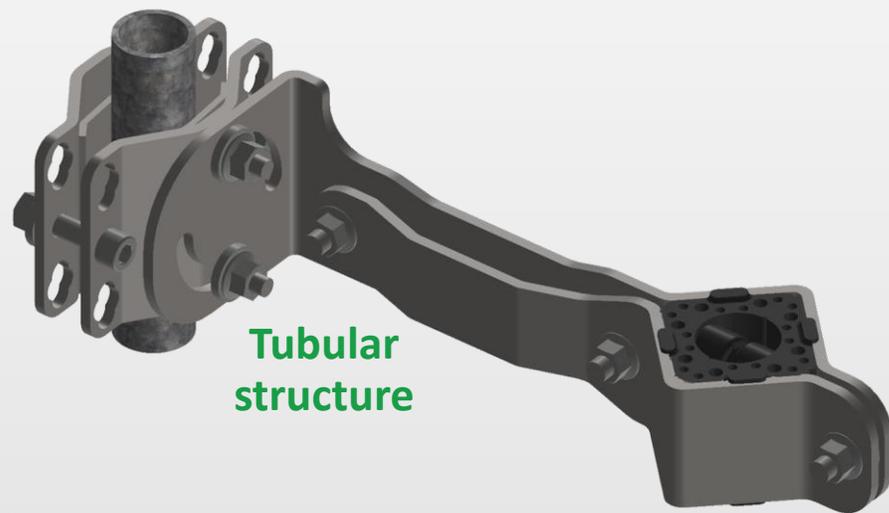
Universal 360° tiltable arm



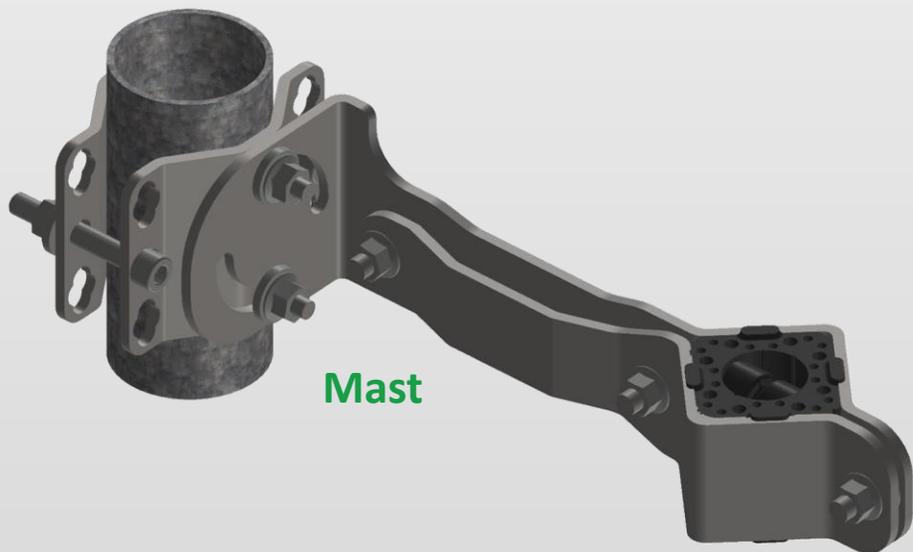
Extreme long-life vibration damper



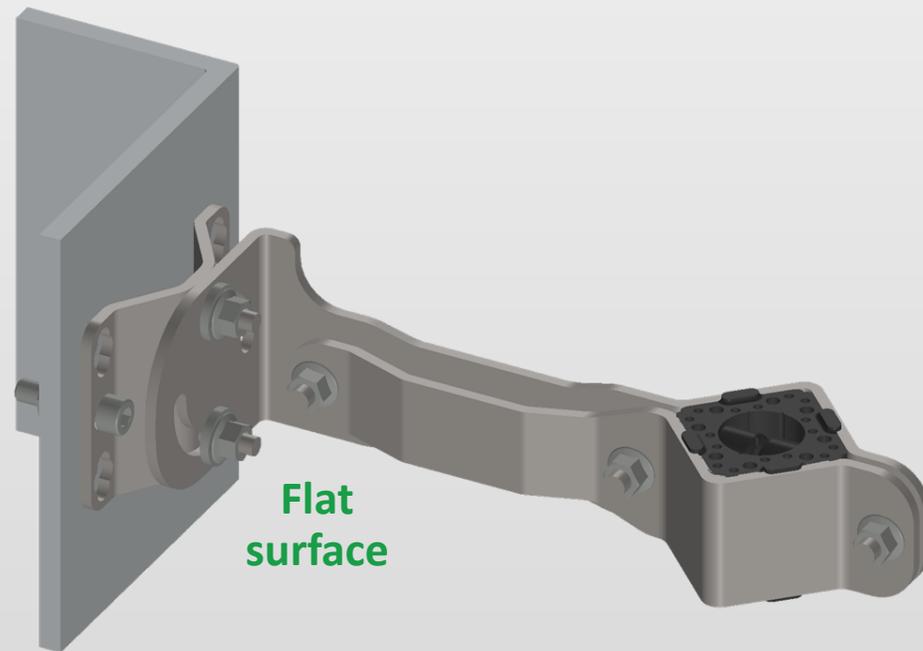
Compatible with any type of supporting structure



Tubular structure

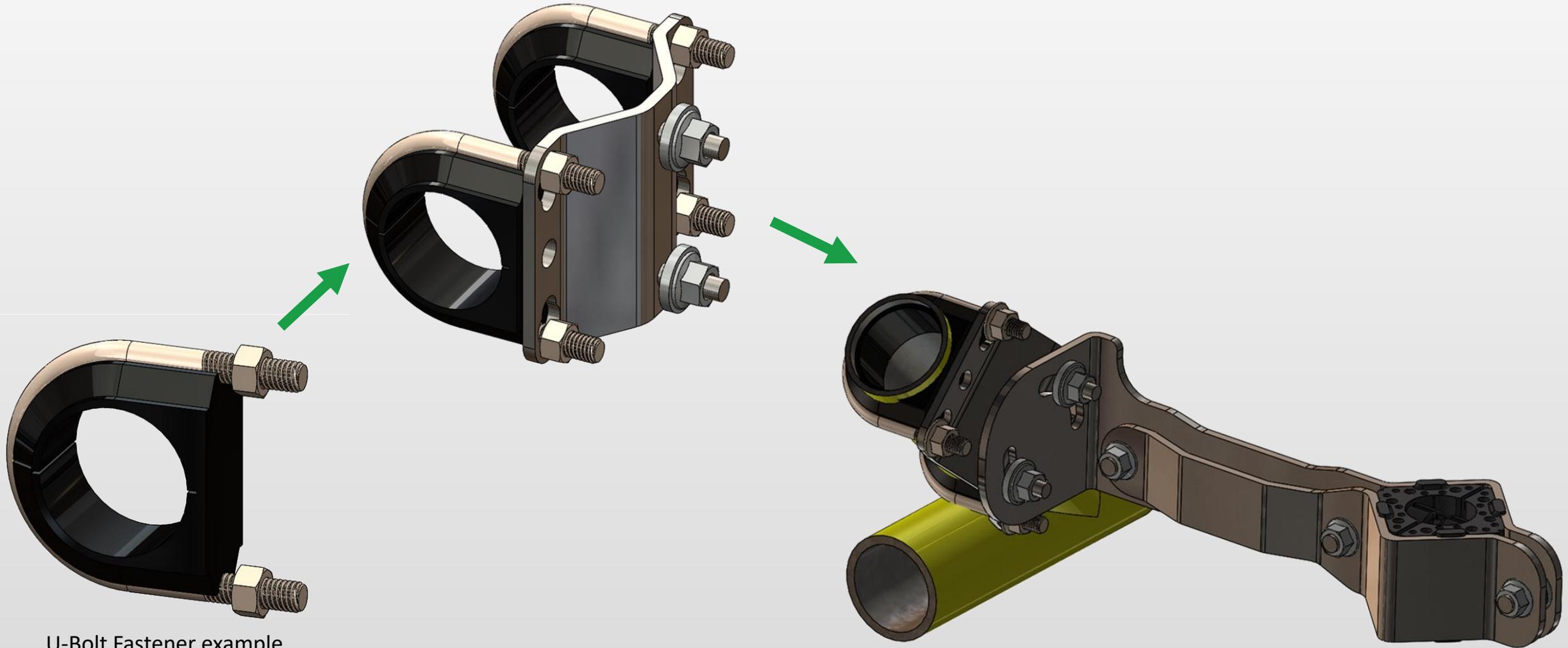


Mast



Flat surface

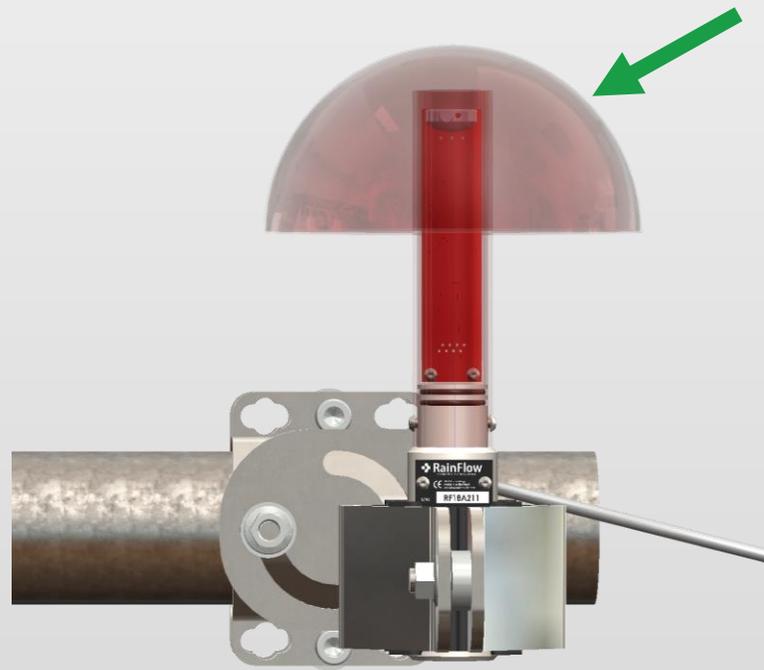
... even standard U-bolt fastener



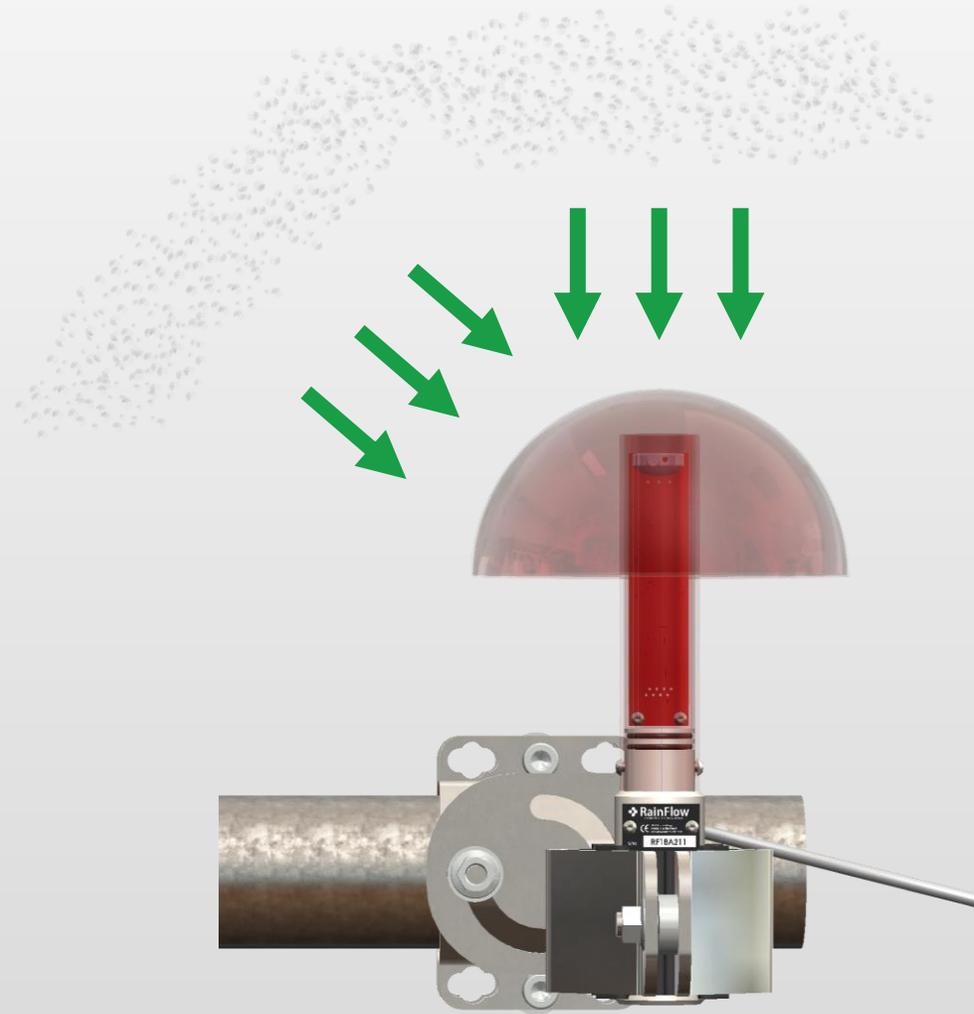
U-Bolt Fastener example
(Ref. 50606030)
not provided

Lifetime calibrated sensing head

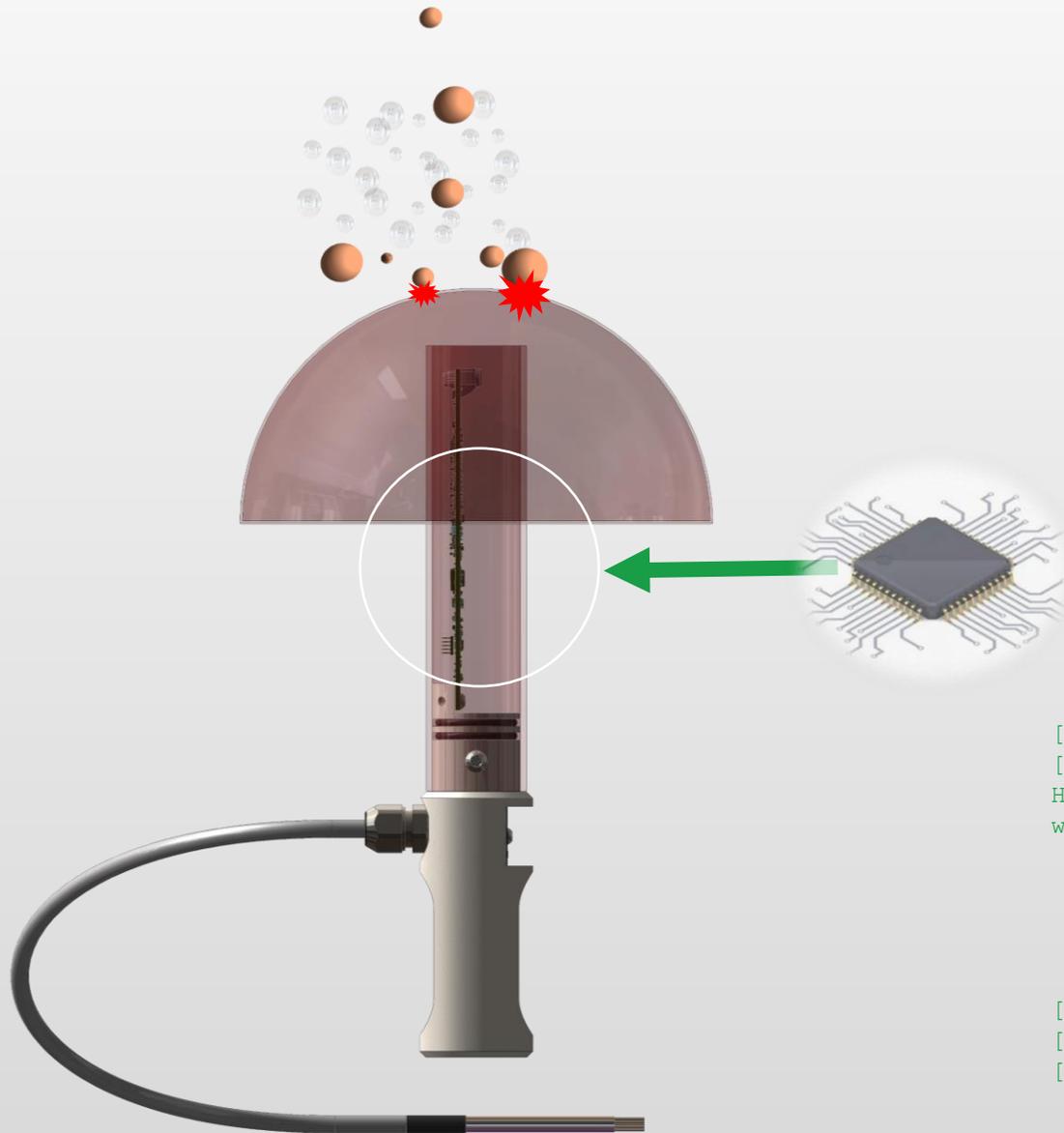
160 mm diameter
stainless steel hemisphere



Omnidirectional wind compatible instrument



Hail detection function



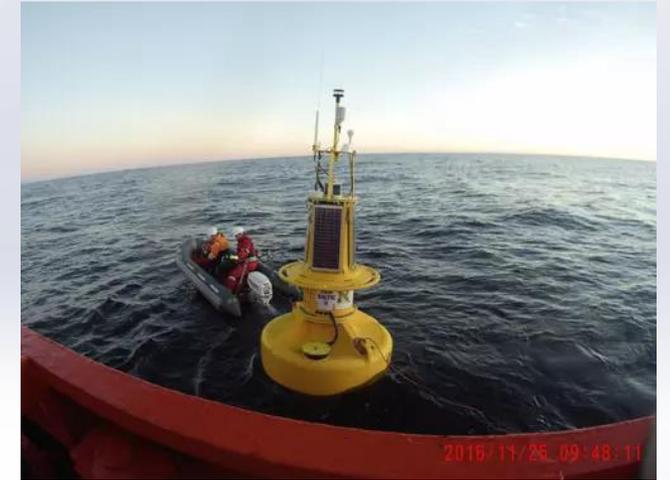
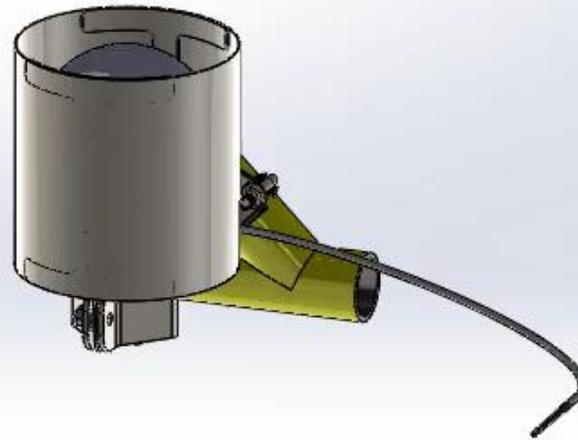
The sensor automatically alerts on the presence of **hail**

```
[...]  
[...]  
HAIL;<counter>;<unit>;<hit_count>;<unit>;<mean_rate>;<max_rate>  
where <counter> is a frame counter incremented at each result  
<unit> is the unit the of following value in the frame: "hit"  
<hit_count> is the number of hailstones [hit]  
<unit> is the unit the of following values in the frame: "hit/s"  
<mean_rate> is the mean rate during measurement [hit/s]  
<max_rate> is the max rate [hit/s]  
[...]  
[...]  
[...]
```

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

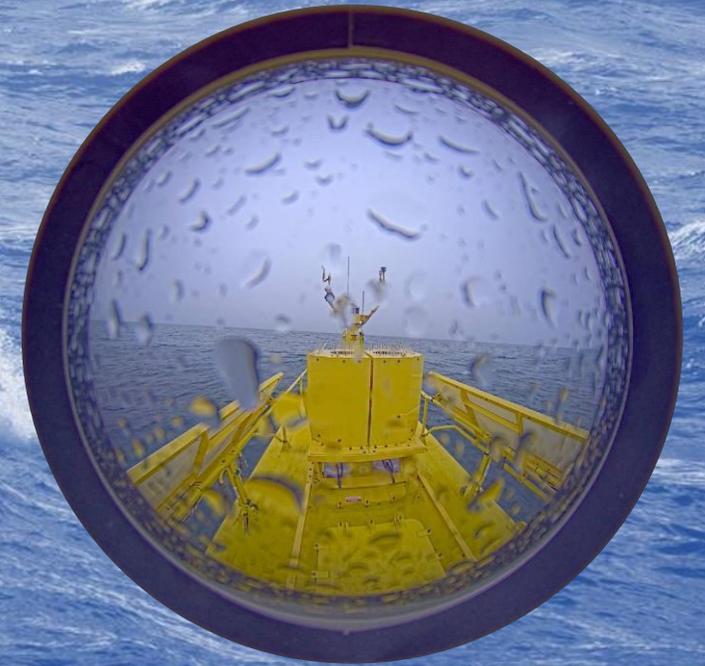
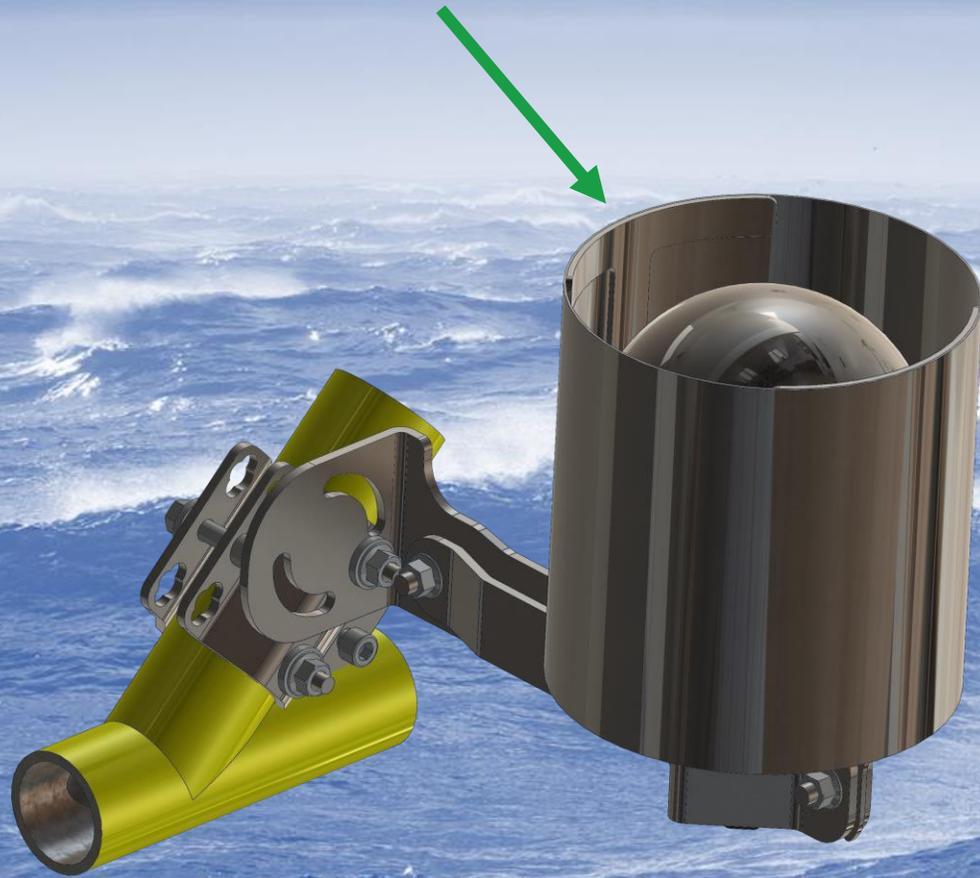


Courtesy of ORSTED Denmark Farm

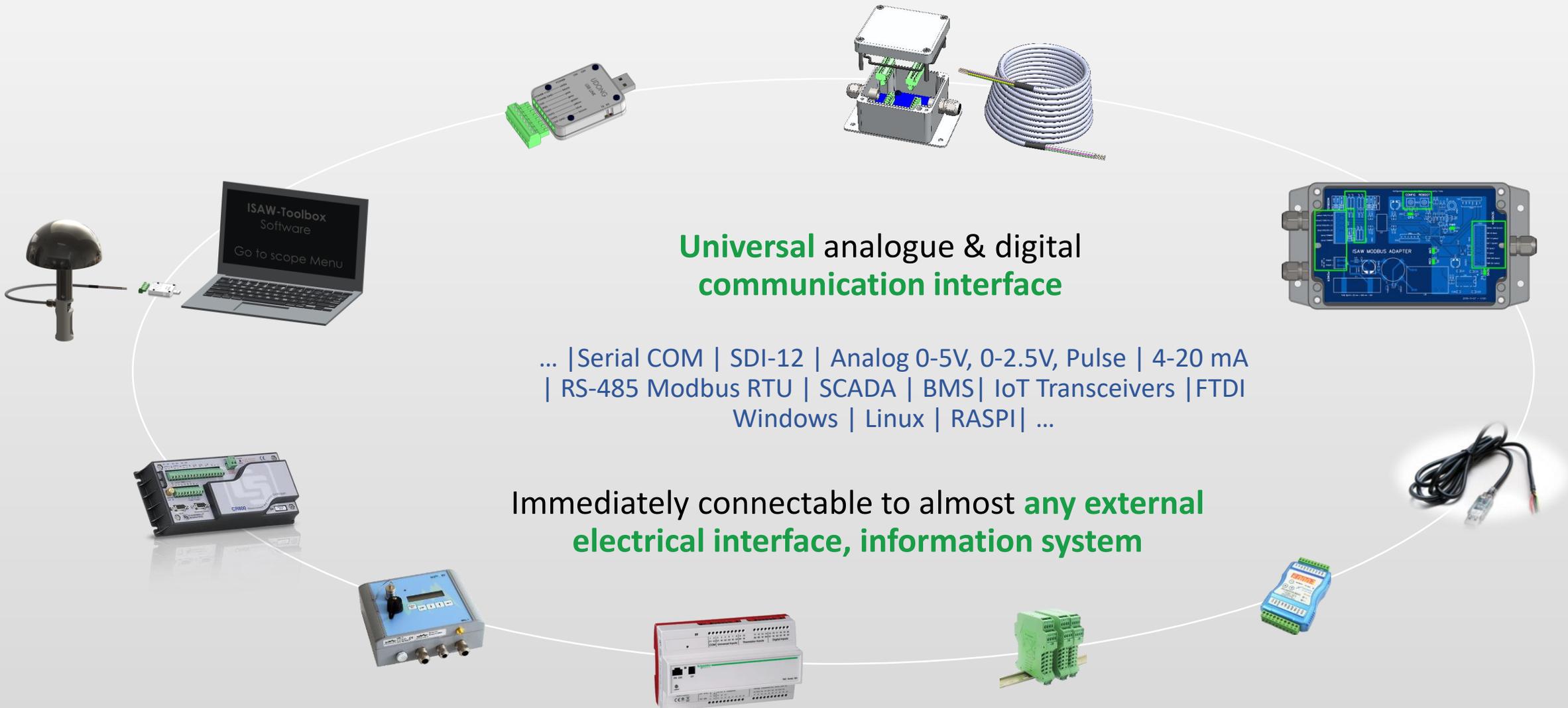


Courtesy of AXYS Metocean Buoy

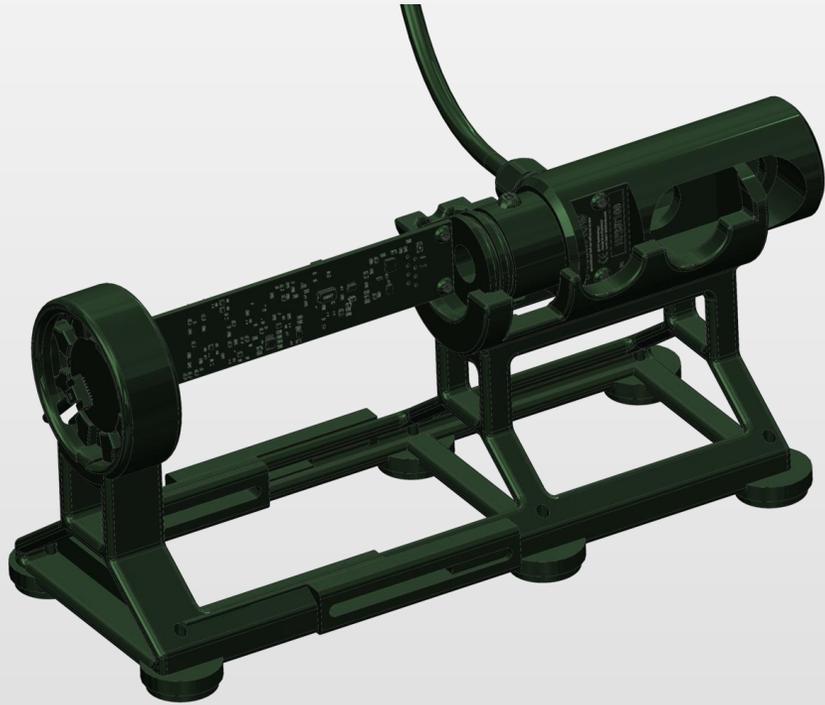
The **splash shield** protects the sensor from splashes



Interfacing the sensor



Traceability and calibration declaration



Individual factory
calibration

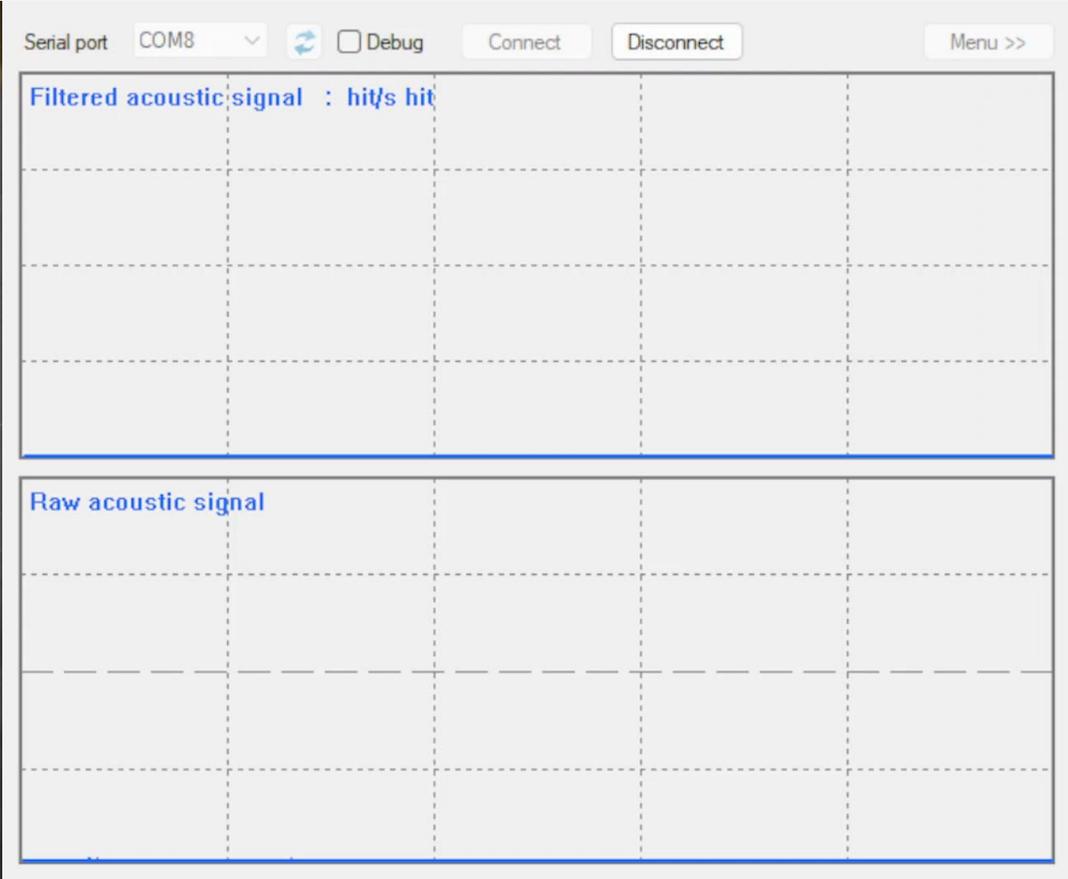


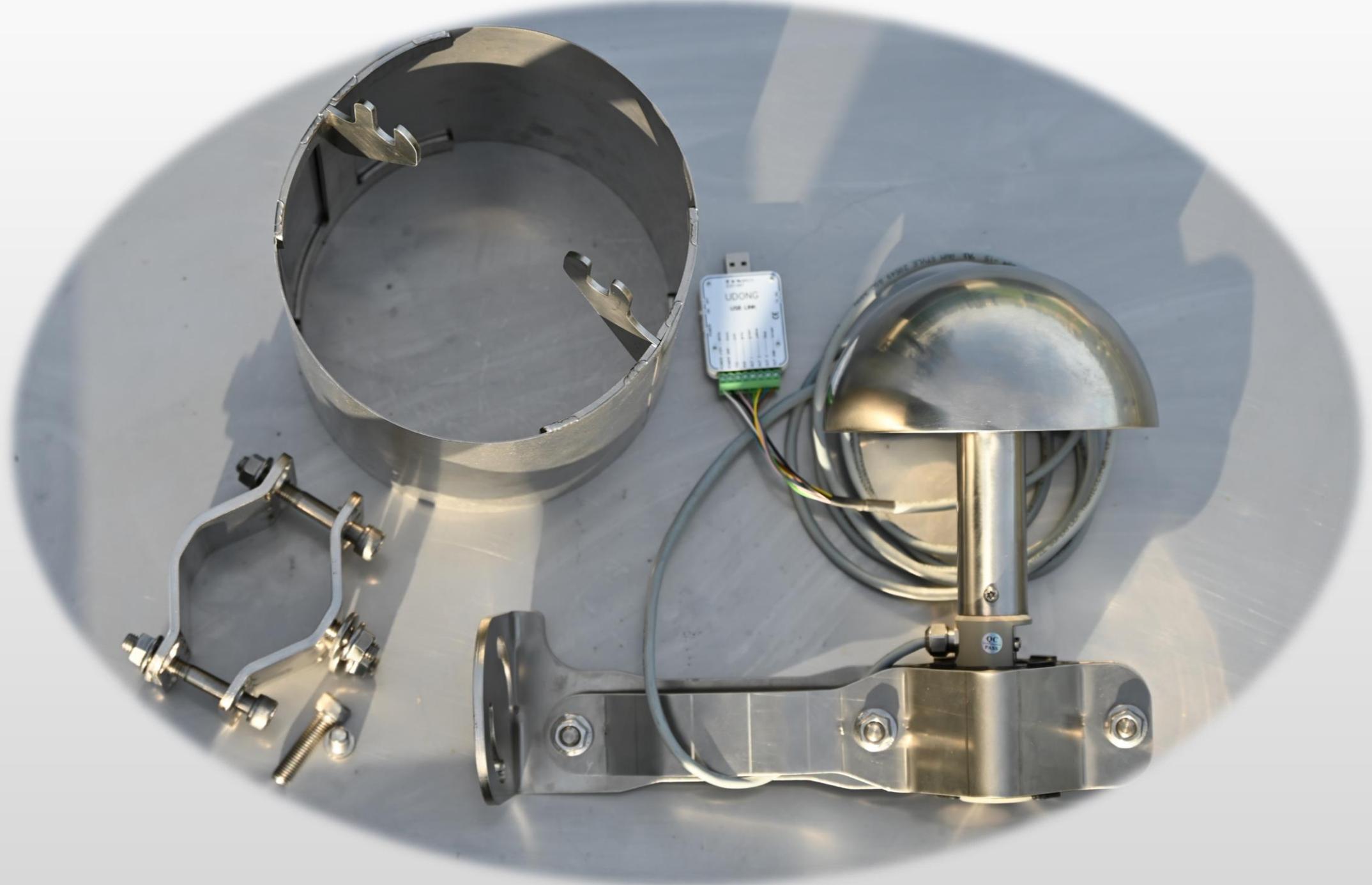
Calibration certificate
provided for each unit

Fast & easy field check

Inelastic shock impact:

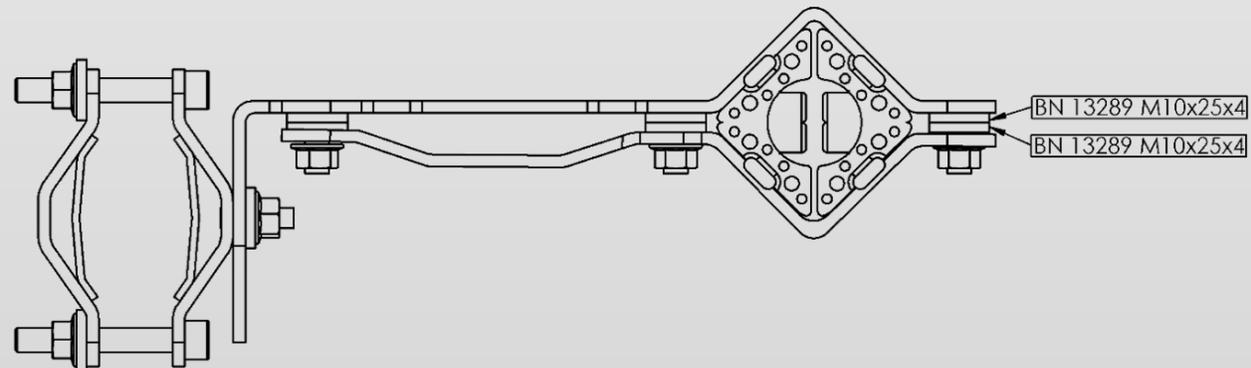
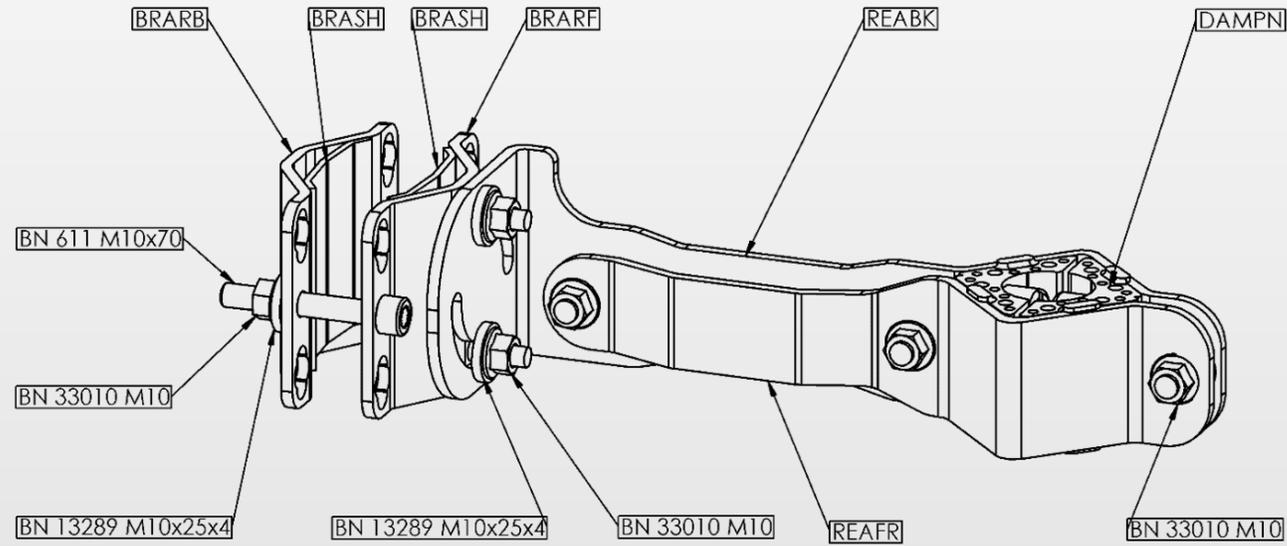
The **sensor (and reading chain)** can be checked at any moment by **gently tapping with your fingertips** or by dropping a calibrated ball







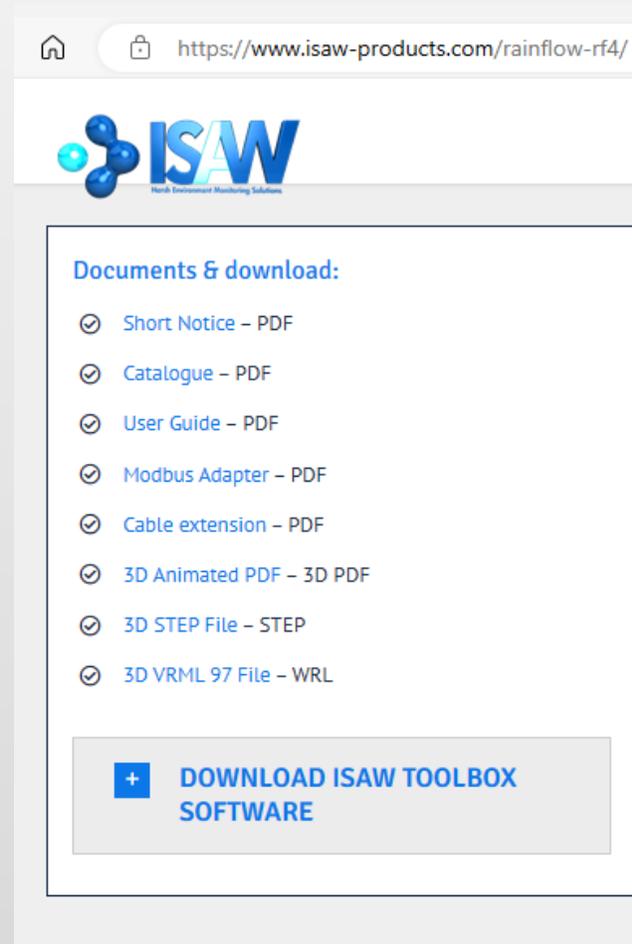
Repairability: very long-term availability of spare parts



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/rainflow-rf4/>. The ISAW logo is visible at the top. Below the logo, there is a section titled "Documents & download:" containing a list of resources:

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

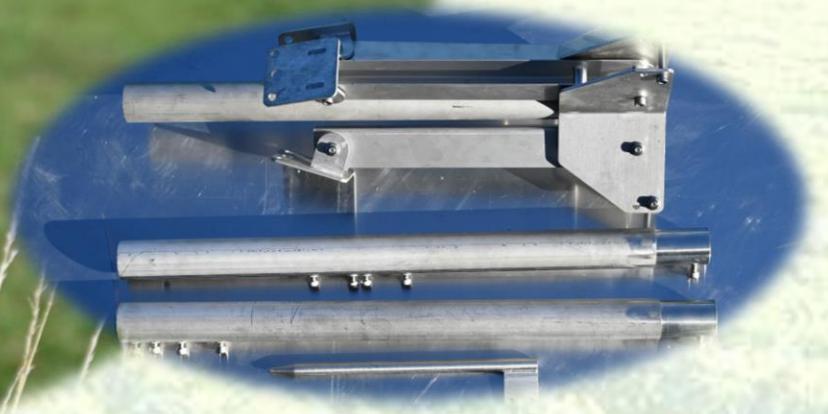
At the bottom of the list, there is a button with a plus sign and the text "DOWNLOAD ISAW TOOLBOX SOFTWARE".

Ultimate rain & hail surveillance: Combining the **RF4** and the **HF4** sensors

HailFlow HF4



RainFlow RF4



TMAST supporting structure



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partners for

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or

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04

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We will answer and guide you in your process.*

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