

SandFlow

windblown sand monitoring sensor



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

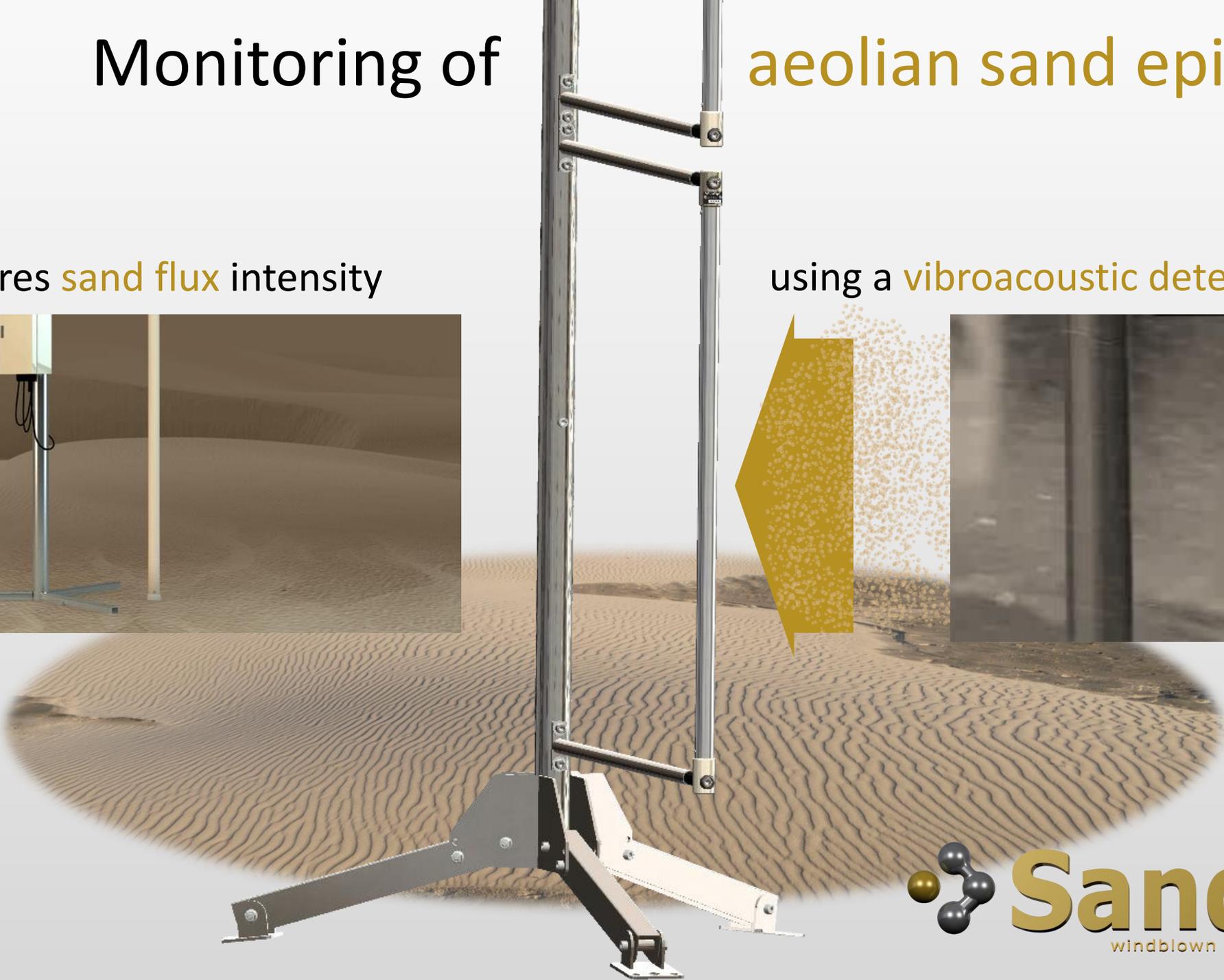
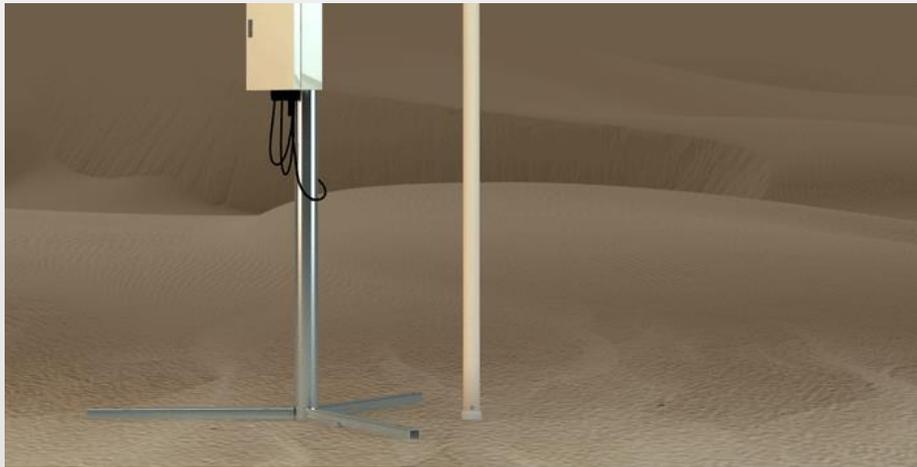
 Made in Switzerland 

Monitoring of

aeolian sand episodes

Measures sand flux intensity

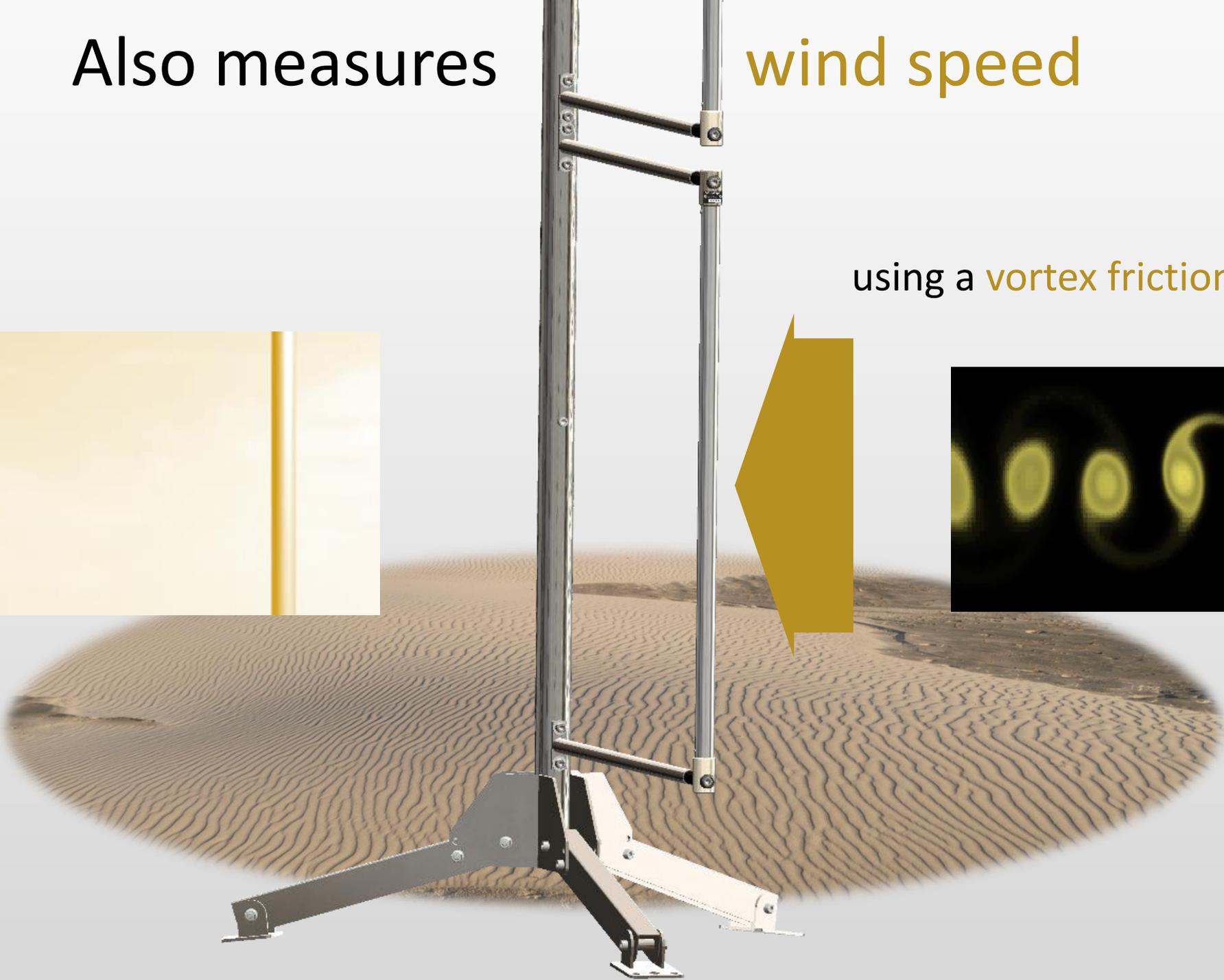
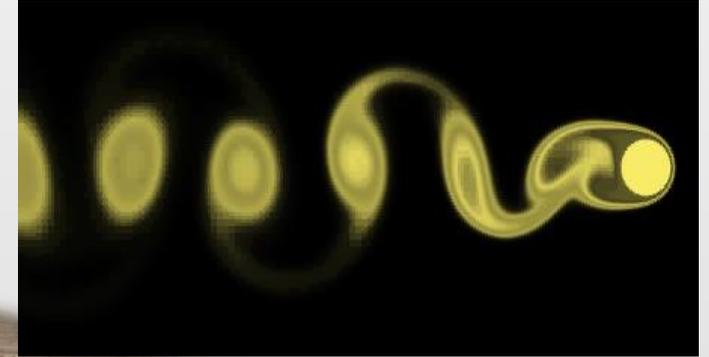
using a vibroacoustic detection principle



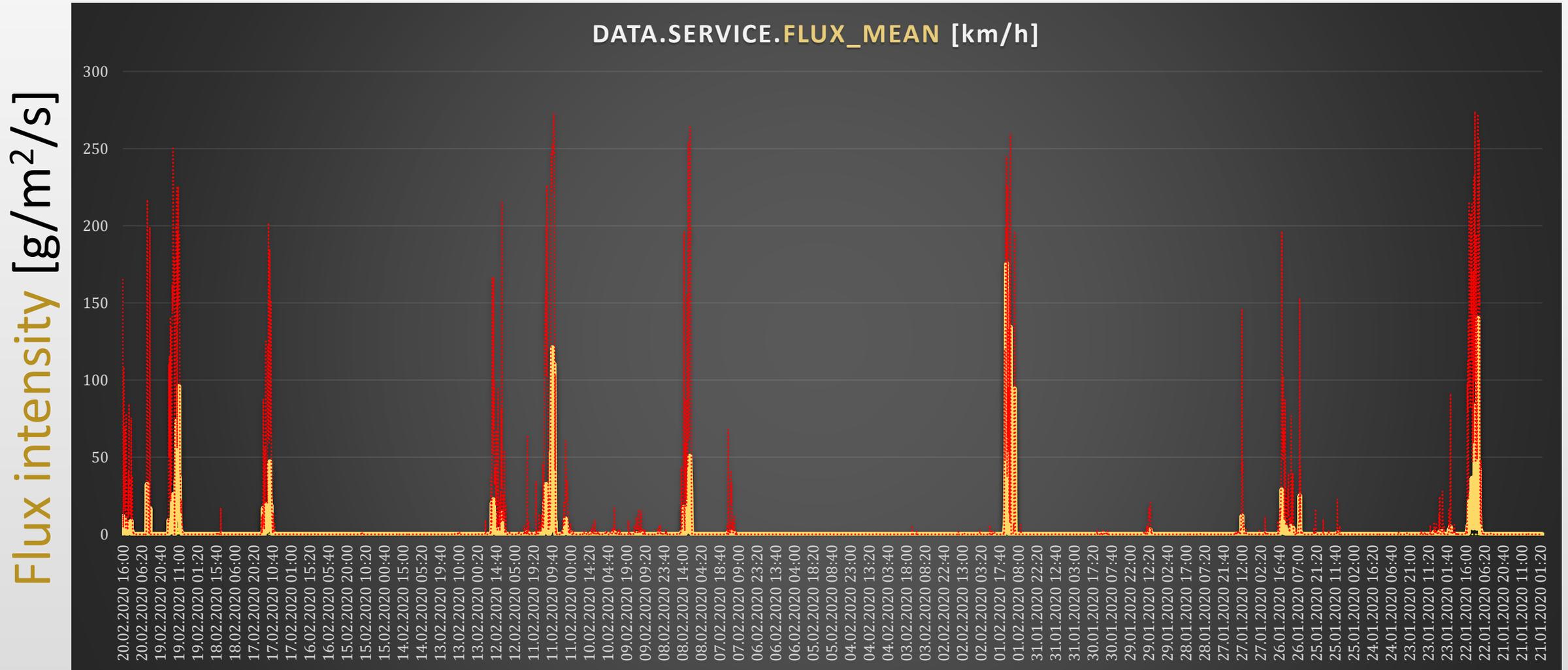
Also measures

wind speed

using a vortex friction principle



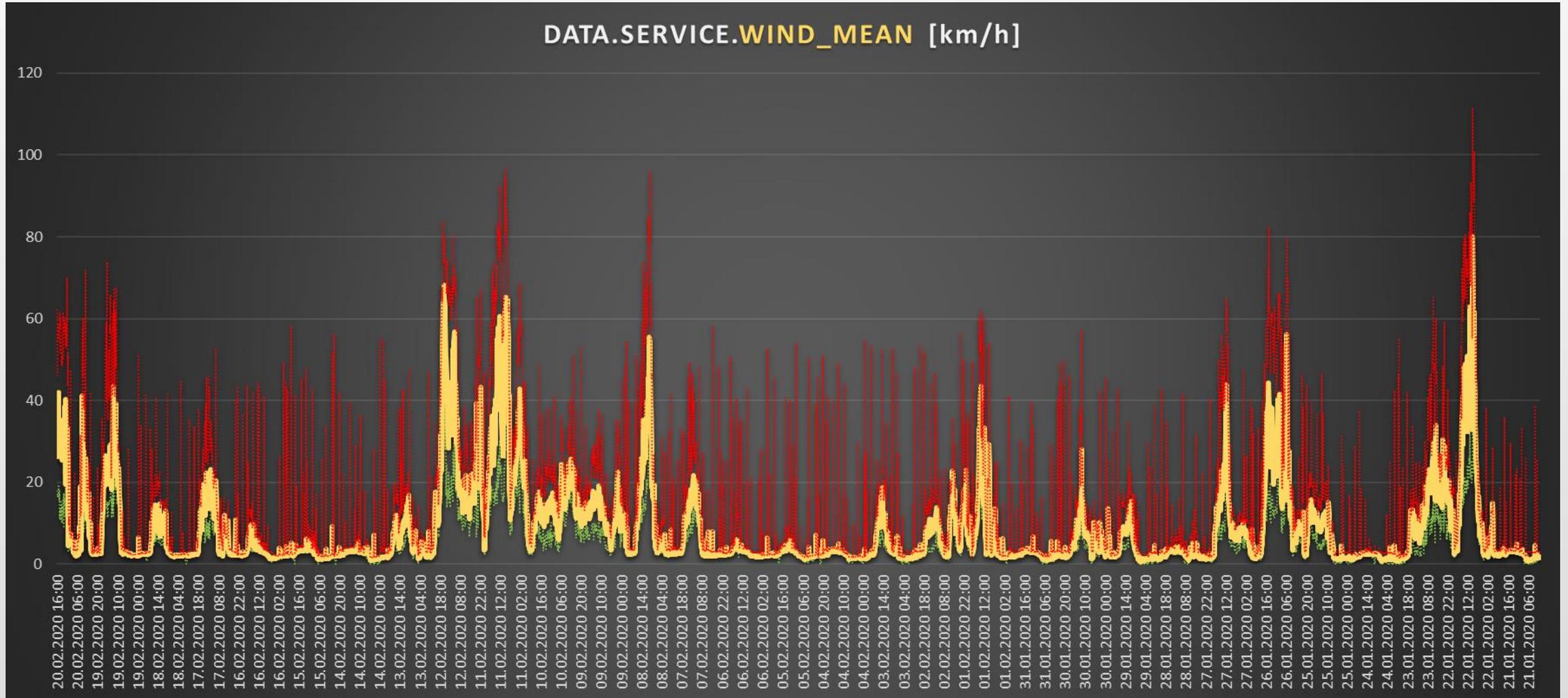
Occurrence and intensity of aeolian sand episodes



in this data example: a dozen of blowing sand episodes in 1 month

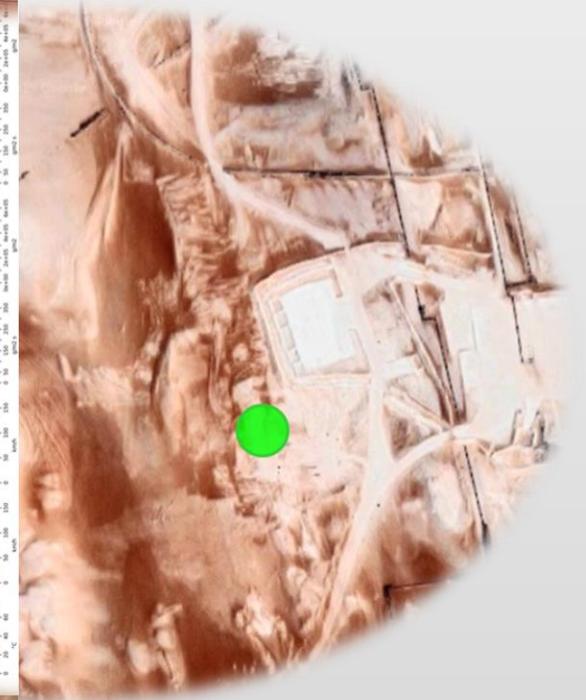
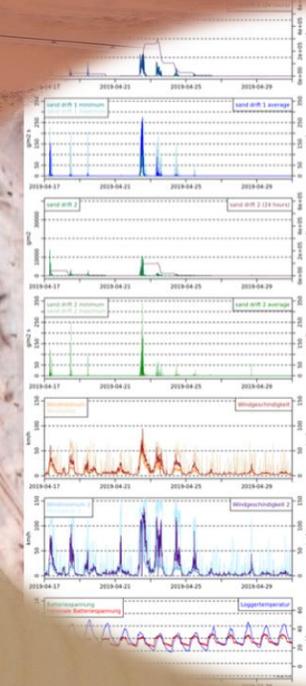
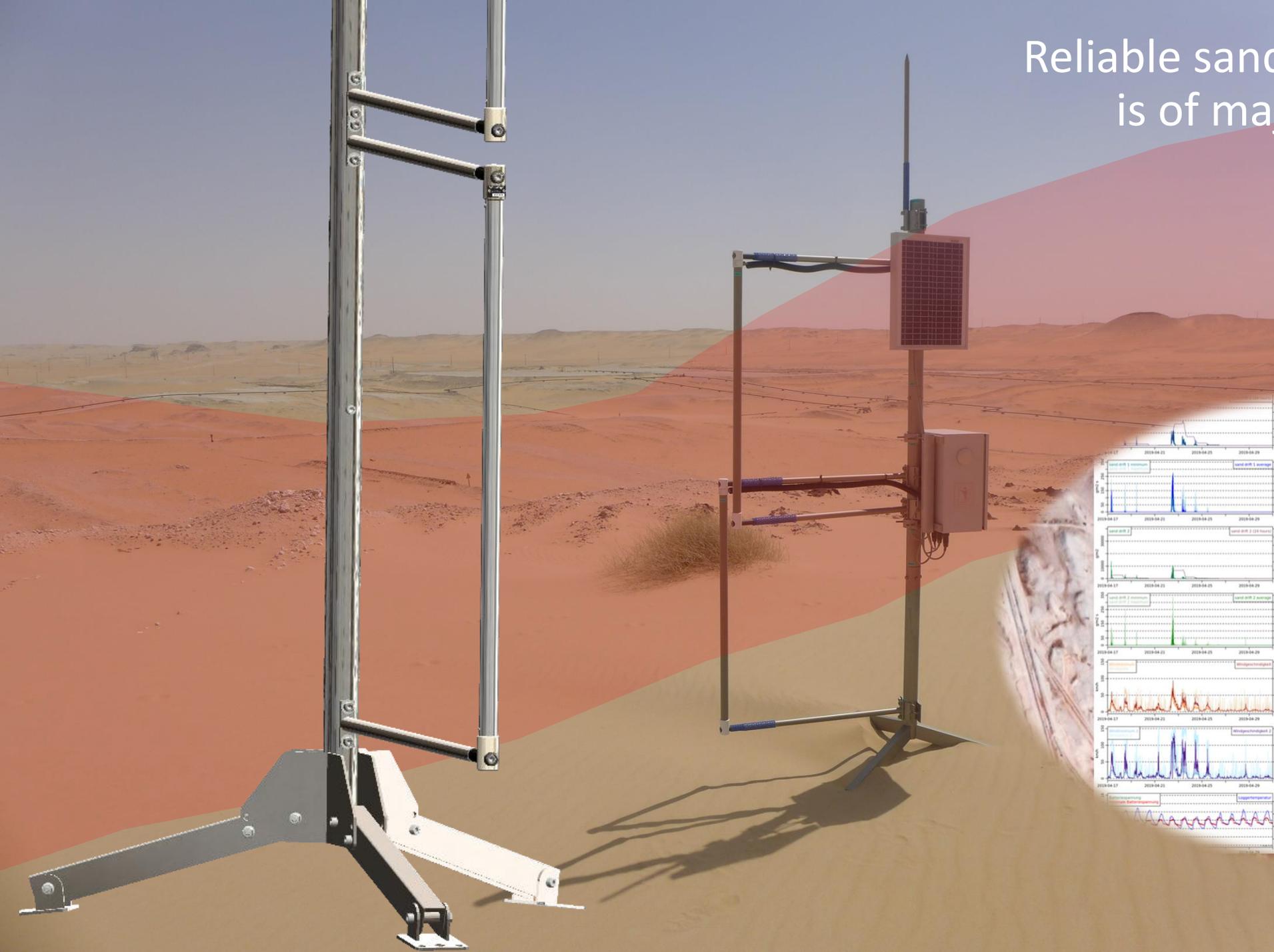
Wind speed monitoring

Wind speed [km/h (or m/s)]



in this example: a whole month of wind

Reliable sandstorm monitoring
is of major importance for
maintenance of
infrastructures

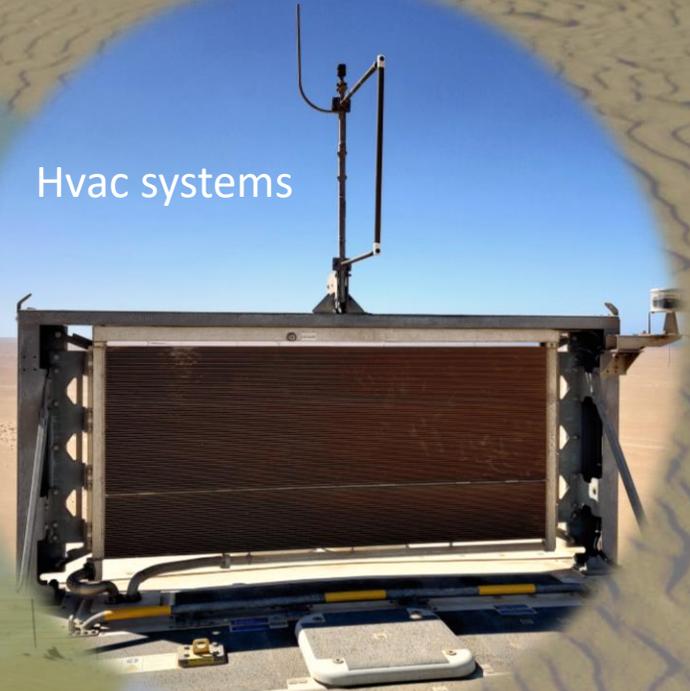


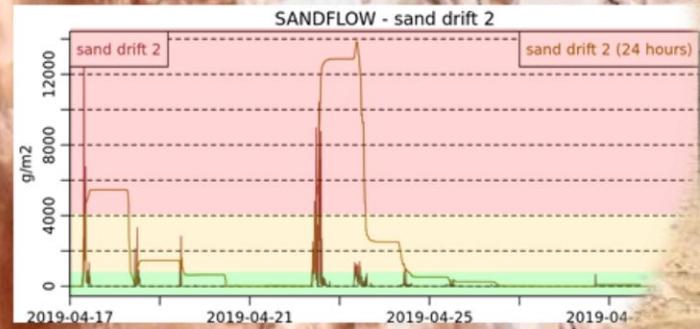
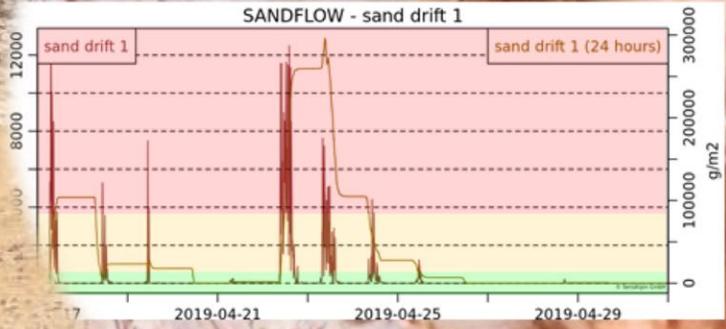
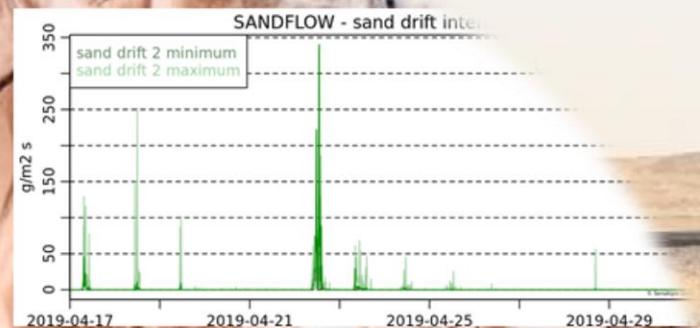
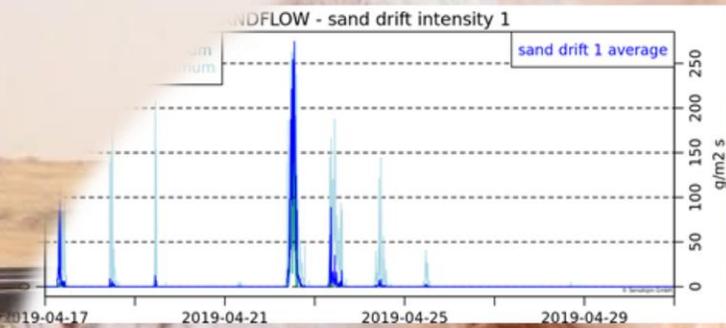
Railways or roads

Power lines

Hvac systems

Wind farms





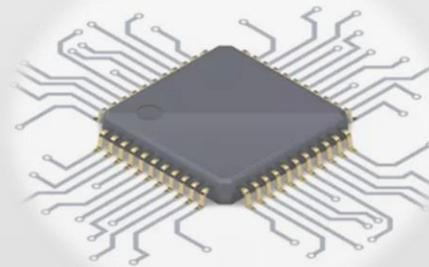
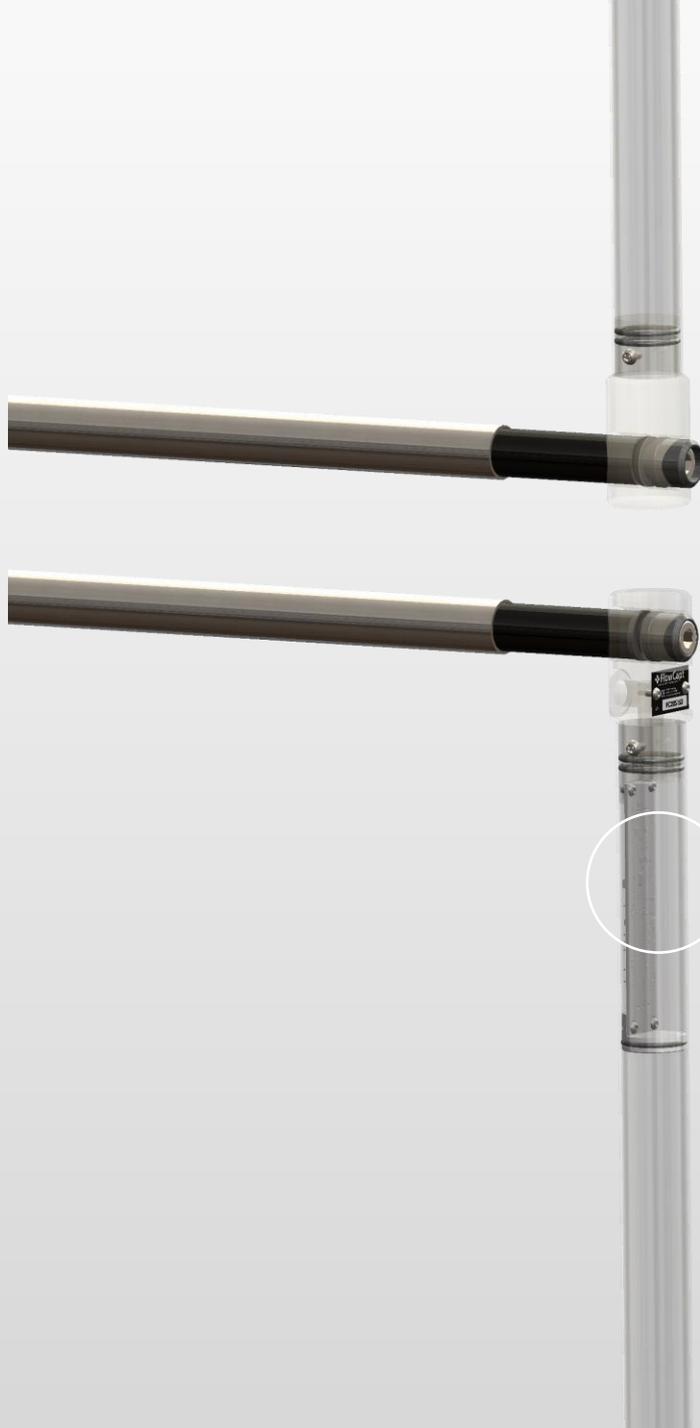
Sand storm status/warning/alert :

- **Green:** no or moderate sand flux during the last n hours (T)
- **Orange:** moderate to considerable sand flux occurrence during the last n hours (T)
- **Red:** strong to extreme sand flux during the last n hours (T)



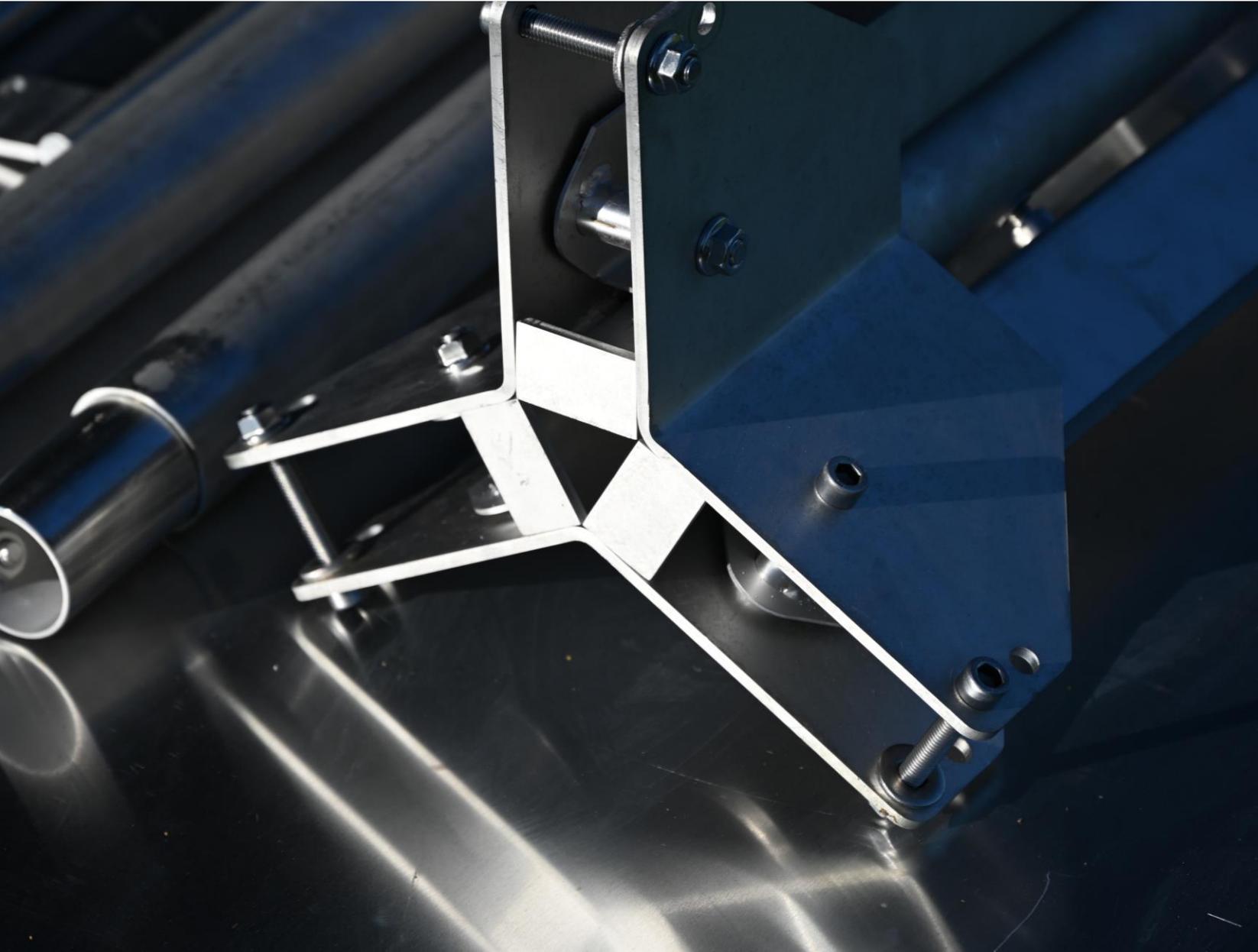
Smart instrument

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



```
[...]  
[...]  
FLUX;<counter>;<unit>;<min>;<avg>;<max>;<std>;<unit>;<sum>  
<counter> is a frame counter incremented at each result  
<unit> is the unit of the following values in the frame: "g/m2/s"  
<min> is the minimum of the flux measurement [g/m2/s]  
<avg> is the average of the flux measurement [g/m2/s]  
<max> is the maximum of the flux measurement [g/m2/s]  
<std> is the standard deviation of the flux measurement [g/m2/s]  
<unit> is the unit of the following value in the frame: "g/m2"  
<sum> is the cumulative flux [g/m2]  
Example: FLUX;987;g/m2/s;247.24;262.41;288.12;4.80;g/m2;98652.94  
[...]  
WIND;<counter>;<unit>;<min>;<avg>;<max>  
<counter> is a frame counter incremented at each result  
<unit> is the unit of the following values in the frame:" km/h"  
<min> is the minimum of the wind measurement [km/h]  
<avg> is the average of the wind measurement [km/h]  
<max> is the maximum of the wind measurement [km/h]  
Example: WIND;987;km/h;57.63;68.74;89.32  
[...]
```

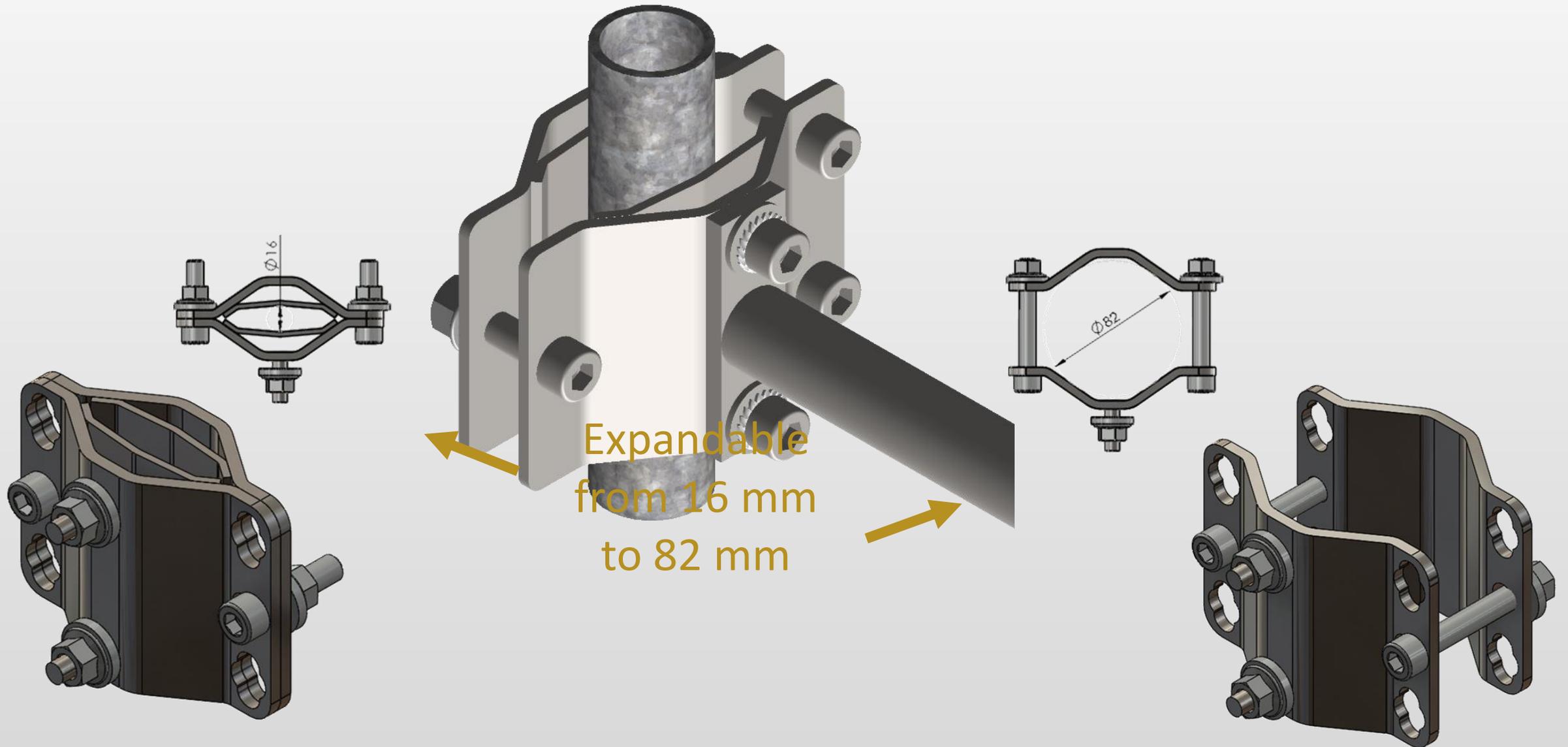
Ultra robust & zero-maintenance instrument



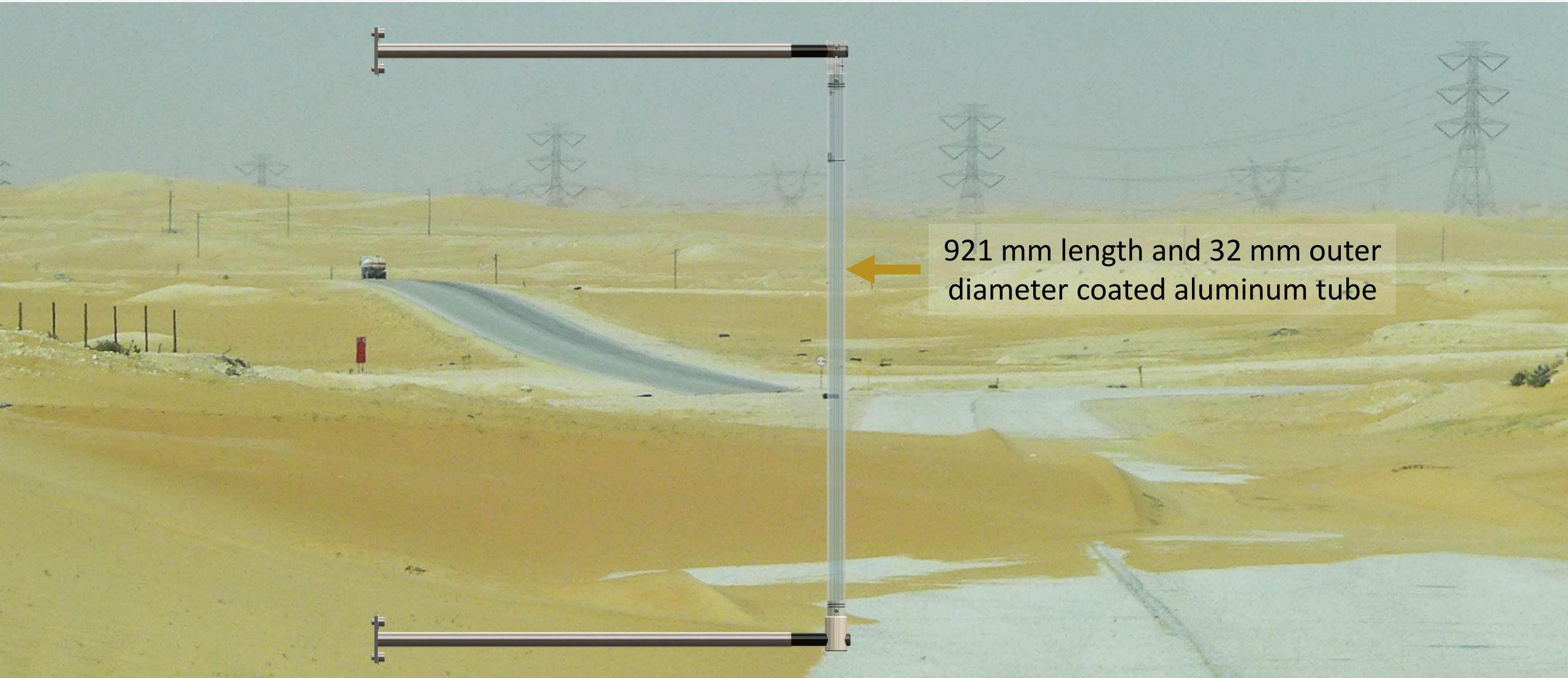
No moving parts

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

Universal V-bracket mounting

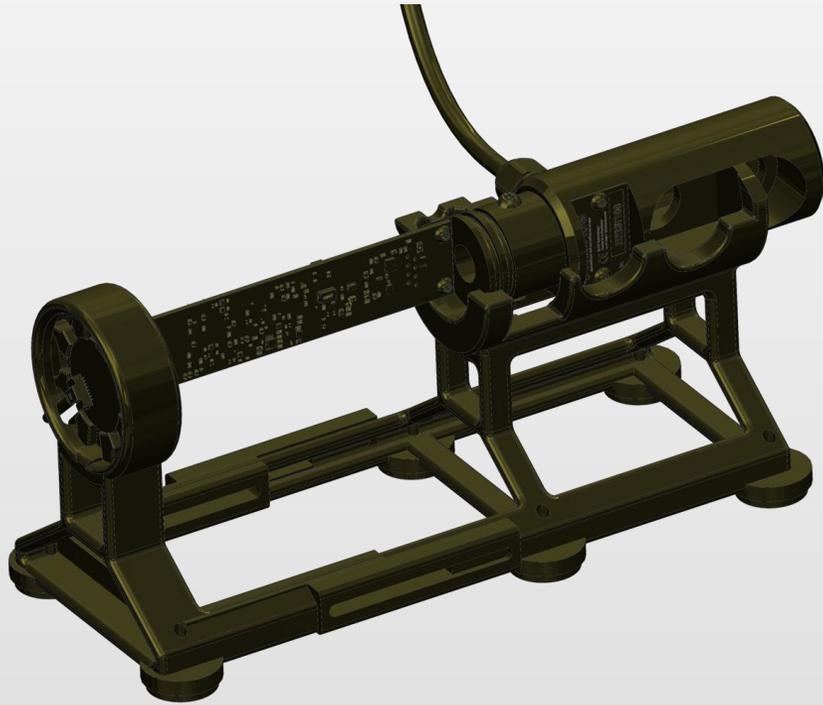


Lifetime calibrated sensing body



921 mm length and 32 mm outer diameter coated aluminum tube

Traceability and calibration declaration

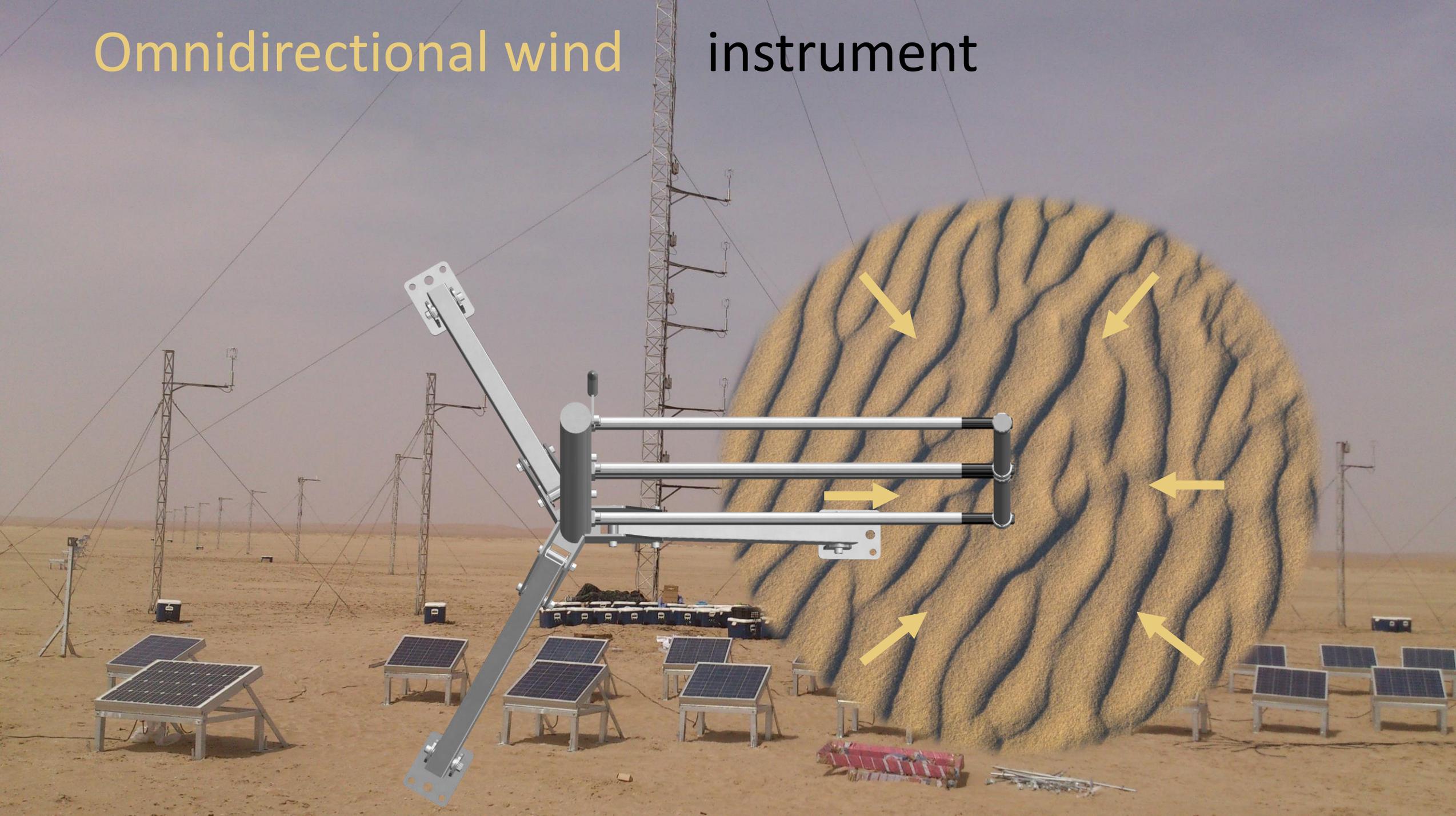


Individual factory
calibration



← Calibration
certificate
provided for
each unit

Omnidirectional wind instrument



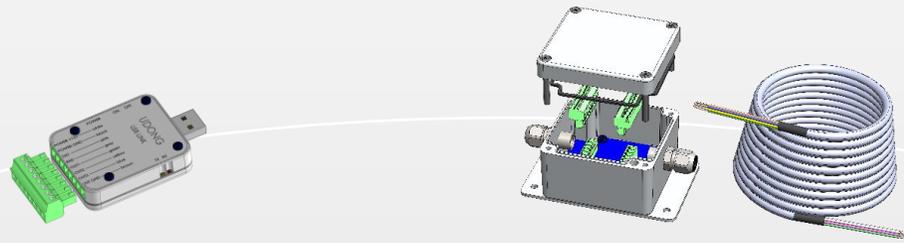
Resists to the

harshest environments



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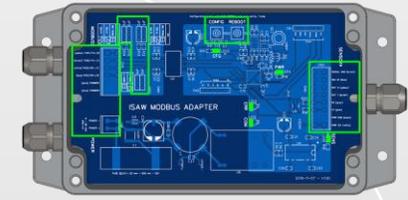
Interfacing the sensor



Universal analogue & digital
communication interface

... | Serial COM | SDI-12 | Analog 0-5V, 0-2.5V, Pulse | 4-20 mA
| RS-485 Modbus RTU | SCADA | BMS | IoT Transceivers | FTDI
Windows | Linux | RASPI | ...

Immediately connectable to almost **any external**
electrical interface, information system



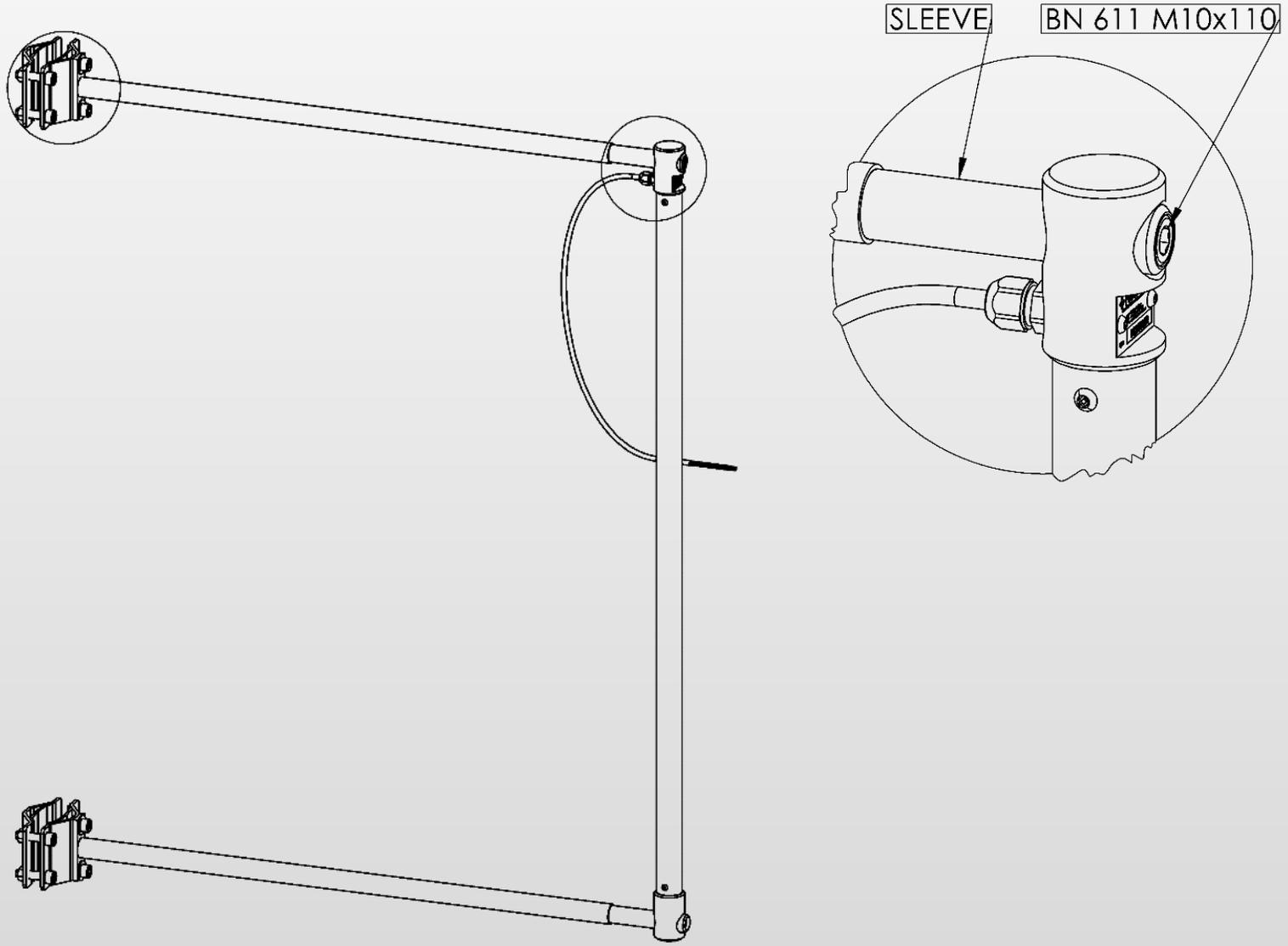
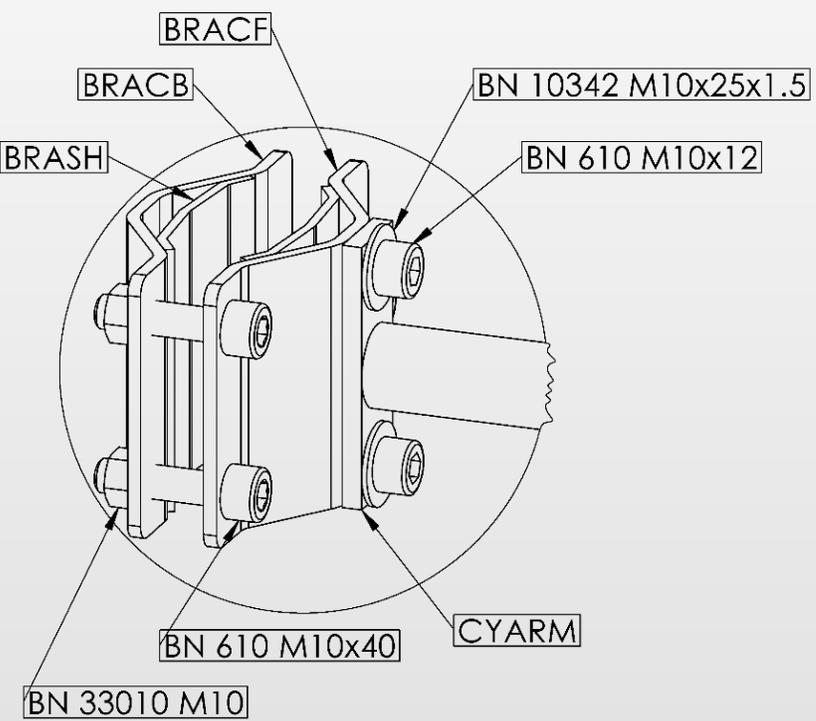
Fast & easy field check

Friction noise:

The **sensor (and reading chain)** can be checked at any moment by **gently scratching it with your fingernail or a metal tool**

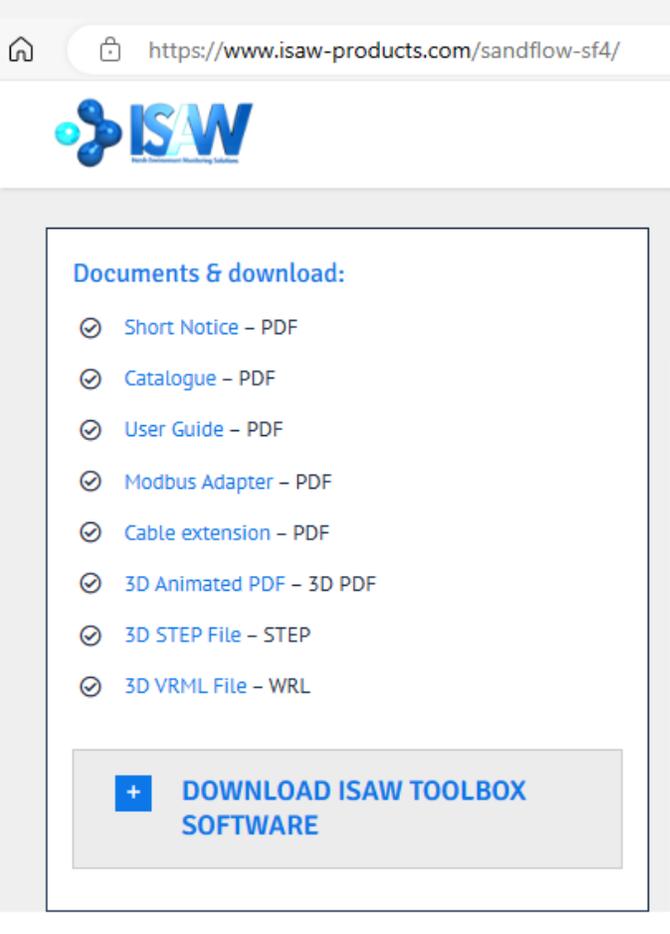


Repairability: very long-term availability of spare parts



Integration in your project

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



The screenshot shows a web browser window with the URL <https://www.isaw-products.com/sandflow-sf4/>. 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 File](#) – WRL

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

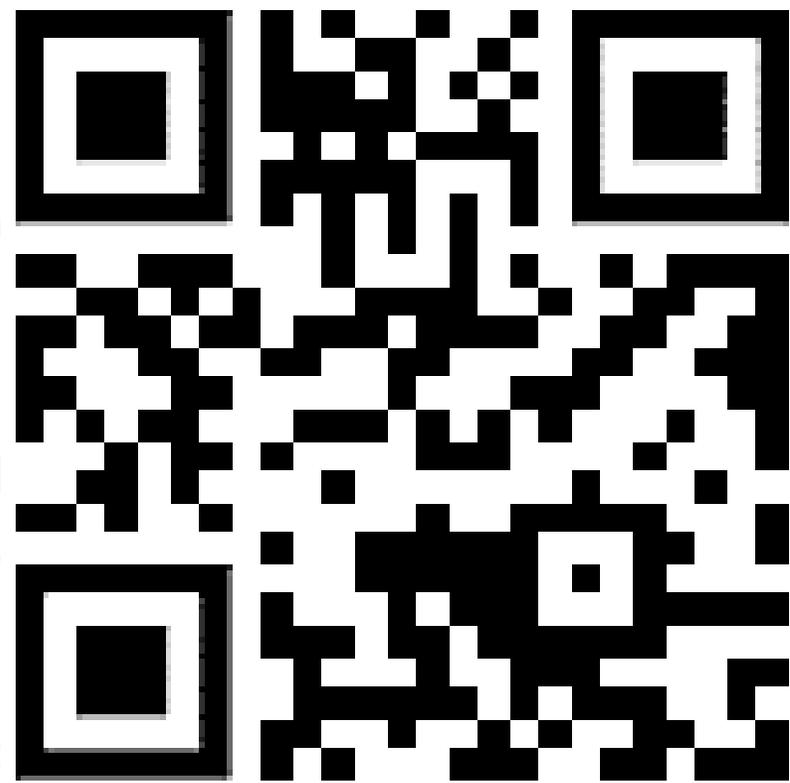
Documents

3D CAD

Utility software



Contact | In
We have w



ce | **Support**
artners for

Sen
or

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04

*We are the c of the sensor.
We will answer and guide you in your process.*

www.isaw-products.com