

Measuring porosity

Measurements taken at different places on the surface of heavily used paragliders show big differences with regards to porosity. It is therefore advisable to follow a unit process when collecting data for evaluating glider porosity.

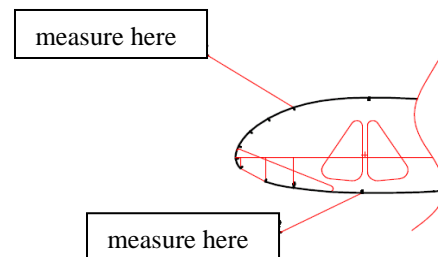
On the basis of more than 10-years experience, we recommend that porosity measurements are taken at specific places over the surface of the glider:

On the leading edge – upper sail (see picture)

- In the middle of canopy – average of at least three neighbouring cells
- On the left side of canopy (approx. 1/4 span) – average of at least two neighbouring cells.
- On the right side of canopy (approx. 1/4 span) – average of at least two neighbouring cells.

On the bottom sail in approx. 1/4 of chord (see picture)

- In the middle of canopy – average of at least two neighbouring cells
- On the left side of canopy – of at least one cell
- On the right side of canopy – of at least one cell



Porosity data evaluation (valid for GRADIENT gliders solely!)

For evaluation, the worst average porosity value should be used. Under normal circumstances, this will be the average value from of the mid cells of the leading edge.

(instrument JDC porosity meter)

Time more than 150 snew
 Time 100 - 150 s like new
 Time 60 - 100 s very slightly used; excellent condition
 Time 30 - 60 s slightly used; still good condition
 Time 20 - 30 s used; short interval checks desirable
 Time 10 - 20 s hard used; check in short interval necessary; take account of total condition of glider; unusable for winch-towing and flying with paramotor
 Time less than 10 s..... not flyable - take out of service!

NB. It is essential that the cloth area being subjected to each test is first examined for micro holes (use a light box and lens) made by thorns for example. Any area showing damage should be avoided for the purposes of testing and patched if required. Also ensure that the cloth is perfectly positioned on the porosity meter without any wrinkles that could cause leakage of air. Remember, we are assessing a characteristic of cloth wear and tear not the specific condition of one small area of the sail.