Porosimeter MK1, MK2, MK2+

In everyday language, permeability is often referred to as "porosity". These two characteristics should not be mixed up because they do not express the same quantities. This is because porosity is the volume of the pores in relation to the total volume of the material. It is in fact the volume of "vacuum" for a unit volume of matter.

Permeability = Airflow through the sample / (Surface × Pressure Difference)

According to the standard for measuring aeronautical fabrics, the pressure difference is set at 2000 Pa.

The MK2+ porosimeter has a different pressure than the one used for the standard, this forces us to correct the calculation by a coefficient that we will call Rp. In the case of MK2+, Rp = 1.56

Formerly the MK1 porosimeter had an Rp of 1.74 because the pressure difference is not the same as that of MK2 or MK2+.

The formula remains valid regardless of the porosimeter model MK1, MK2, MK2+:

$$Por = \frac{5400}{t\ [s]};\ \frac{Lt}{m^2 * min}$$

The measurement of the useful volumes for MK1 and MK2(+) are as follows:

for the MK1 we have 0.303 Liters in 90s
For the MK2(+) we have 0.338 liters in 90s

You have to divide these values by 1.5 to get the volume per minute.

$$Por = Rp * \frac{Volume\ [L]}{S\ [m^2] * t[s]} * 60$$

The value is slightly rounded down because the surface of the fabric to be measured is never perfect.