

PQ-100 Application Notes.

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A frequently asked question is how long will the PQ 100 run on its internal 12V 12Ah battery? The answer depends upon the following:

- A. Type of filter media.
- B. Diameter of filter media.
- C. Concentration of aerosol in the air being sampled.
- D. Other characteristics of the aerosol, such as size, shape and surface characteristics.

It is easy to test for A and B. C and D can occur in infinite variety. Nevertheless, we have developed useful information by sampling in our workshop environment, which is generally between 20 to 30 micrograms/m³. In using the following information, bear in mind that the values presented are nominal figures for the instruments tested. In order to add reality to the test, the instruments used all had over 1000 hours run time on all components, including batteries.

Filter Type	Flow Rate lpm	Filter DiameterC mm	Initial ΔP cm of H ₂ O	Concentration mg/m ³	Elapsed Time C hrs.
Fiberglass GF/A	25	47	23	17.02	19.97
Fiberglass GF/A	16.7	47	18	11.93	37.63
Fiberglass GF/A	10	47	10	24.62	50.05
Fiberglass GF/A	4	47	4	27.26	71.83
2mm Teflo	25	47	18	19.56	17.37
2mm Teflo	16.7	47	13	17.88	31.82
2mm Teflo	10	47	8	23.44	44.78
2mm Teflo	4	47	2	19.24	76.63
0.8mm MCE	16.7	37	138	86.84	7.5
0.8mm MCE	10	37	66	10.01	21.63
0.8mm MCE	4	37	20	7.31	45.57
0.8mm MCE	10	25	155	34.05	13.2
0.45mm & 5mm AHERA	4	25	200	27.99	13.82
TK15 G3M	25	47	15	14.63	32.33
TK15 G3M	16.7	47	10	28.08	53.3
TK15 G3M	10	47	5.3	59.97	68.7
TK15 G3M	4	47	2	7.57	113.5
41 Whatman	25	47	19	13.69	21.4
41 Whatman	16.7	47	12.7	19.67	37.53
41 Whatman	10	47	11.4	5.61	65.36
41 Whatman	4	47	57.6	15.64	114.51

The list will be updated as further information is gathered. If you are considering an application for the PQ100 with regard to a particular filter media of sampling device, please contact Robert Gussman at the above address or e-mail at bsk29@mail.idt.net.