

How often do I need to change HJ3100 filters to be sure that the carbon filter continues to extract fumes?

The filters on a Hakko HJ3100 Fume Extraction System should be checked regularly and replaced when airflow is no longer adequate for proper operation. Hakko does not establish a frequency for filter checks and replacement since the life of the filters depends on the conditions in which they are used and the length of time for which they are used.

In the Hakko HJ3100 User Manual, a general guideline for filter checks and replacement is given under the assumed conditions of a simple soldering workstation that operates for 8 hours per day, 5 days per week. Under these test conditions, Hakko found that the prefilter would need to be replaced every 2 to 3 weeks and the HEPA/Carbon Combination filter would need to be replaced after 16 weeks or 640 hours of operation.

Note that using different solders and fluxes and/or changes in the quality of the air being filtered may cause the filters to fill faster and require replacement sooner due to higher levels of particulates.

The activated carbon used in the HEPA/Carbon Combination filter was designed so that the material becomes saturated at approximately the same time the HEPA media becomes clogged with particulates and restricts airflow to the point it is no longer adequate for proper operation.

In order to determine whether the activated carbon is extracting fumes or is saturated, the exhaust airflow will need to be monitored by special devices used to detect the levels of fumes that would typically be absorbed by the filter. The typical absorption efficiency of the activated carbon filter is approximately 80%. When these levels begin to rise, it is an indication that the efficiency level is decreasing and the activated carbon is becoming saturated.

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