

What is claimed is:

1. A gas filter, comprising:
 - a housing including a mounting portion and a main portion, the mounting portion configured to mount the gas filter on a surface of a device, the main portion configured to be positioned apart from the surface of the device, the main portion extending from the mounting portion in a horizontal direction, the housing having an inlet and an outlet and defining a flow channel between the inlet and the outlet, the flow channel having first and second channel portions, the first channel portion extending from the inlet to the second channel portion, the second channel portion extending in a direction substantially parallel to the horizontal direction; and
 - a filter member positioned in the flow channel between the inlet and the outlet.
2. The gas filter of claim 1, wherein first channel portion extends in a direction substantially perpendicular to the direction of the second channel portion.
3. The gas filter of claim 1 or 2, wherein the flow channel includes a chamber defined by the housing, the filter member being positioned in the chamber.
4. The gas filter of claim 3, wherein the chamber has a larger cross-sectional area than any other portion of the flow channel to gain a large flow volume through the filter member.
5. The gas filter of any one of claims 1 to 4, wherein the main portion of the housing is configured to extend along a side of the device.
6. The gas filter of any one of claim 1 to 5, wherein the main portion of the housing has a cylindrical shape.
7. The gas filter of any one of claims 1 to 6, wherein the mounting portion of the housing includes the inlet, and wherein the main portion of the housing includes the outlet.

8. The gas filter of any one of claims 1 to 7, wherein the filter member includes two parallel surfaces, the surfaces positioned substantially perpendicular to the horizontal direction.
9. The gas filter of any one of claims 1 to 8, wherein the filter member includes a membrane.
10. The gas filter of any one of claims 1 to 9, wherein the filter member includes a sintered material having a plurality of layers.
11. The gas filter of any one of claims 1 to 10, wherein the filter member is welded to the main portion of the gas filter.
12. The gas filter of any one of claims 1 to 11, wherein the filter member is a disc.
13. The gas filter of any one of claims 1 to 12, wherein the filter member and the outlet are concentrically aligned.
14. The gas filter of any one of claims 1 to 13, wherein the outlet is offset from the second channel portion.
15. The gas filter of any one of claims 1 to 14, wherein the housing has an electro-polished surface finish on fluid-facing surfaces.
16. A method of filtering a gas, the method comprising:
 - directing a stream of gas through the gas filter of claim 1; and
 - capturing impurities within the gas at the filter member.