CLAIM(S):

1. A filter disk segment comprising

(a) a filter element disk comprising a central hub having a central hub opening;

(i) a first porous component including a first end by the central hub opening, and a second end distal to the first end, the first porous component having an upper surface, the upper surface including at least two raised fluid flow channels, each of the at least two raised fluid flow channels having an inner diameter and an arch-shaped porous wall, each of the at least two raised fluid flow channels extending toward the first end and the second end, and a lower surface facing a drainage component;

(ii) a second porous component including a first end by the central hub opening, and a second end distal to the first end, the second porous component having an upper surface facing the drainage component and a lower surface, the lower surface including at least two raised fluid flow channels, each of the at least two raised fluid flow channels having an inner diameter and an arch-shaped porous wall, each of the at least two raised fluid flow channels extending toward the first end and the second end;

wherein each of the at least two raised fluid flow channels in the first porous component and in the second porous component are curved in shape between the first end and the second end;

(iii) the drainage component allowing fluid flow therethrough arranged between, and in fluid communication with, the first porous component and the second porous component, the drainage component including the central hub opening;

wherein the central hub supports the first porous component, the second porous component, and the drainage component.

2. A filter disk segment comprising

(a) a filter element disk comprising a central hub having a central hub opening;

(i) a first porous component including a first end by the central hub opening, and a second end distal to the first end, the first porous component having an upper surface, the upper surface including at least two raised porous ribs, each of the at least two raised porous ribs extending toward the first end and the second end, and a lower surface facing a drainage component, the lower surface including at least two fluid flow channels, each of the at least two fluid flow channels included in the lower surface having an inner diameter and an arch-shaped porous wall, each of the at least two fluid flow channels extending toward the first end and the second end;

(ii) a second porous component including a first end by the central hub opening, and a second end distal to the first end, the second porous component having an upper surface facing the drainage component, the upper surface including at least two fluid flow channels, each of the at least two fluid flow channels included in the upper surface having an inner diameter and an arch-shaped porous wall, each of the at least two fluid flow channels extending toward the first end and the second end, and a lower surface, the lower surface including at least two raised porous ribs, each of the at least two raised porous ribs extending toward the first end and the second end;
wherein each of the at least two fluid flow channels and each of the at least two raised porous ribs in the first porous component and in the second porous component are curved in shape between the first end and the second end;

(iii) the drainage component allowing fluid flow therethrough arranged between, and in fluid communication with, the first porous component and the second porous component, the drainage component including the central hub opening;

wherein the central hub supports the first porous component, the second porous component, and the drainage component.

3. The filter disk segment of claim 1, wherein the at least two raised fluid flow channels in the first porous component are offset from the at least two raised fluid flow channels in the second porous component.

4. The filter disk segment of any one of claims 1 or 3, wherein each of the at least two raised fluid flow channels in the first porous component and in the second porous component have cross-sectional areas that change between the first end and the second end.

5. The filter disk segment of claim 2, wherein the at least two raised porous ribs in the first porous component are offset from the at least two fluid flow channels in the first porous component, and the at least two raised porous ribs in the second porous component are offset from the at least two fluid flow channels in the second porous component.

6. The filter disk segment of any one of claims 2 or 5, wherein each of the at least two fluid flow channels in the first porous component and in the second porous component have cross-sectional areas that change between the first end and the second end.

7. A porous filter comprising at least two filter disk segments according to any one of claims 1-6.

8. A filter device comprising a housing having an inlet and an outlet and defining a fluid flow path between the inlet and the outlet and a porous filter comprising at least two filter disk segments according to any one of claims 1, 3 or 4, arranged in the housing across the fluid flow path, the filter device arranged to allow fluid to be passed through the inlet and through the arch-shaped porous walls of the at least two raised fluid flow channels of the first and second porous components, forming a filtrate passing along the inner diameters of each of the at least two raised fluid flow channels and the drainage component through the central hub and the outlet.

9. A method of filtering fluid, the method comprising passing the fluid through the filter device of claim 8.