

## **HOLLOW FIBRE MEMBRANE MODULE**

### **ABSTRACT**

The present invention provides a hollow fiber membrane module with an integrated self-cleaning system. The hollow fiber membrane module of the present invention has improved the filtration efficiency and reduced the manufacture cost. In one embodiment, the hollow fiber membrane module comprises a container in which the filtration is performed, wherein the container has fluid communication means for introduction of suspension liquids into the container and removal of retentates and permeates from the container; at least one fiber bundle, wherein each fiber bundle comprises a plurality of hollow fiber membranes with first ends and second ends; wherein the first ends of the hollow fiber membranes are potted in a solid bed that in turn is fixed in a mold and sealed by sealers so as to form a collection chamber and a filtration chamber within the container; and wherein the second ends of the hollow fiber membranes are closed by a sealer and disposed within the filtration chamber; and at least one flushing pipe with a plurality of flushing holes for introducing the suspension liquid into the filtration chamber to cause the unrestrained fiber membranes having a seaweed-like movement so as to self-clean the surfaces of the hollow fiber membranes.

Fig 1