

Ionics* Electrodialysis MK1 Stack

FACT SHEET

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Lab-Scale Stack for ED/BPED

Veolia offers a laboratory scale ED/BPED (Electrodialysis/Bipolar Electrodialysis) stack for use by academia, private laboratories, and R&D centers to perform experiments and feasibility tests on ED and/or BPED applications.



Figure 1: Assembled Ionics MK1 stack

Component Size

The membranes and spacers have a nominal size of 9" x 10" (22.9cm x 25.4cm). The spacer for the laboratory scale stack (PN 3195190) provides 31 in² (200 cm²) of active membrane area. It is made of polypropylene mesh and EVA gasket area. All Ionics ion-exchange membranes that are commercially available have lab-scale versions.

Stack Hardware Kit (part# 3049801)

The hardware kit is intended to allow for construction of a 10 cell ED stack. The stack hardware kit includes:

- 2 Endblocks
- 2 Endplates
- 4 Tie Rods
- 1 Coated Titanium Anode
- 1 Hastelloy-C Cathode
- 24 MK1 spacers
- Fittings for ½" Flexible tubing
- Hardware for securing Stack on tie rods

The membranes are not included in the stack hardware kit above. A 10 cell ED stack would typically require 10 anion membranes, 10 cation membranes and 2 electrode membranes.

Membrane Selection

We recommend discussing your application with your sales representative or engineering team in order to select membranes to purchase.

Below is an overview of the most commonly used MK1 membranes for process applications. For more details on each type of membrane, please refer to the [Ionics membrane fact sheet](#).

Ionics Electrodialysis MK1 Stack

Part number	Description	Suggested application
3015585	ED-ANION,AR103P,MK1	Whey, BPED
3207733	ED-ANION,AR103TP,MK1	BPED
3048220	ED-ANION,AR103P,BP-TREAT,MK1	BPED (Anion side of BP membrane)
3182062	ED-ANION,AR103N,BP-TREAT,MK1	BPED (Anion side of BP membrane)
3156796	ED-ANION,AR204E,MK1	EDR (BW & WW Desal)
3156813	ED-ANION,AR204T,MK1	EDR (BW & WW Desal)
3192437	ED-ANION,AR204P,MK1	Amine
3137152	ED-ANION,AR908E,MK1	EDR (BW & WW Desal), ED process applications
3180522	ED-ANION,AR908T,MK1	EDR
3015583	ED-CATION,CR61P,MK1	Whey, BPED
3180490	ED-CATION,CR61N,MK1	BPED (Cation side of BP membrane)
3180556	ED-CATION,CR62T,MK1	EDBC
3195316	ED-CATION,CR63TP,MK1	BPED (3C and 2C), ED process applications
3015584	ED-CATION,CR64H,MK1	Electrode compartment membrane only
3156825	ED-CATION,CR67P,MK1	ED process applications
3156819	ED-CATION,CR67E,MK1	EDR (BW & WW Desal)
3156823	ED-CATION,CR67T,MK1	EDR (BW & WW Desal)
3195190	ED-SPACER,MK1,S	

Pilot skid

Veolia offers pilot skids for rent or purchase. Alternatively, we can support you with the necessary engineering information to construct your own. Please discuss the preferred route with your Veolia representative.

Contact us

Please contact your Veolia representative, or visit our website for additional information.



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