membranium®
RM Nanotech

# nanoRO

## Extra low pressure reverse osmosis membrane elements for brackish water desalination
## KCH Series

### Product Description

| | |
|---|---|
| Membrane material | Composite polyamide |
| Membrane type | ORM33K |
| Design | Spiral wound |
| Features | Fiberglass shell (-C) or shrink film-wrapped (-F) |

### Specification

| Model | Flow* | | Rejection | Area | | Spacer | |
|---|---|---|---|---|---|---|---|
| | m3/hr | GPD | normal**/ minimal*** | m2 | ft2 | mm | mil |
| KCH 8040-C | 1,95 | 12 400 | 99,1/98,3 | 41 | 440 | 0,66 | 26 |
| KCH 8040-C3 | 1,6 | 10 500 | 99,1/98,3 | 35 | 375 | 0,86 | 34 |
| KCH 8040-C-DRY | 1,95 | 12 400 | 99,1/98,0 | 41 | 440 | 0,66 | 26 |
| KCH 8040-C3-DRY | 1,6 | 10 500 | 99,1/98,0 | 35 | 375 | 0,86 | 34 |
| KCH 8040-F | 1,95 | 12 400 | 99,1/98,3 | 41 | 440 | 0,66 | 26 |
| KCH 8040-F3 | 1,6 | 10 500 | 99,1/98,3 | 35 | 375 | 0,86 | 34 |
| KCH 8040-F-DRY | 1,95 | 12 400 | 99,1/98,0 | 41 | 440 | 0,66 | 26 |
| KCH 8040-F3-DRY | 1,6 | 10 500 | 99,1/98,0 | 35 | 375 | 0,86 | 34 |

* *Test conditions: test solution of NaCl 500 mg/l, P=0,7 MPa, T=25 °C, pH=7,5. Recovery -15%*

* *Flow of each single element in a batch may vary for +/-15%*

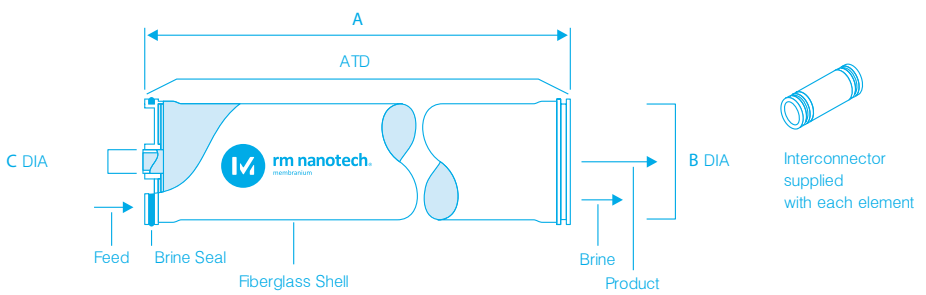
** *Nominal rejection is reached after 48 hours of continuous operation on test solution*

*** *Minimal rejection of a new element after 20 minutes' test on test solution*

### Operating conditions

| | |
|---|---|
| Recommended operation pressure, MPa | 0,6-0,9 |
| Maximum operation pressure, MPa | 4,1/2,1 |
| Maximum pressure drop, MPa | 0,07 |
| Operation temperature, °C 1) | 4-45 |
| pH at continuous operation at T<35°C | 2-11 |
| pH at continuous operation at T<45°C | 3-10,5 |
| Chemical cleaning, temperature, °C | T<45 T<35 T<25 |
| CIP pH (short time operation) | 2-11 1-11.5 1-12 |
| Free chlorine content, mg/l max | 0,1 |
| Maximum feed flow, m3/hr | 17 |
| Concentrate/permeate ratio on each element, min | 5:1 |
| SDI (15 minutes test), max | 5 |
| Turbidity, NTU max | 1 |

1) *During continuous work with pH over 10 the temperature must not exceed 35°C*




| Model | A mm | B mm | B' (ATD) mm | C mm | Weight kg |
|---|---|---|---|---|---|
| KCH 8040-C (3) | 1016 | 203 | 200 | 28,6 | 15.5 |
| KCH 8040-C3-DRY | 1016 | 203 | 200 | 28,6 | 14,7 |
| KCH 8040-F (3) | 1016 | 203 | 200 | 28,6 | 14 |
| KCH 8040-F3-DRY | 1016 | 203 | 200 | 28,6 | 13,2 |