

# HFUG-2020AN

## Pressurized Outside to In / Dead-end Filtration Ultrafiltration (UF) Membrane Module

The HFUG-2020AN module is Toray's latest UF innovation that features hollow fibers with a smaller diameter but with improved membrane durability and performance. The result is an increased surface area per module for more production output.

| Membrane Characteristics                 |                   | Unit                              | Value                          |
|------------------------------------------|-------------------|-----------------------------------|--------------------------------|
| Membrane Material                        |                   |                                   | PVDF (Polyvinylidene fluoride) |
| Nominal Pore Size                        |                   | μm                                | 0.01                           |
| Outer Membrane Surface Area (module)     |                   | m <sup>2</sup> (ft <sup>2</sup> ) | 90 (969)                       |
| Operating Parameters                     |                   | Unit                              | Value                          |
| Maximum Feed water / Filtrate Flow       |                   | m <sup>3</sup> /h (gpm)           | 15 (66)                        |
| Maximum Backwash Flow                    |                   | m <sup>3</sup> /h (gpm)           | 16.8 (74)                      |
| Maximum Air Flow                         |                   | Nm <sup>3</sup> /h (scfm)         | 9.0 (5.3)                      |
| Maximum Inlet Pressure                   |                   | kPa (psi)                         | 300 (43.5)                     |
| Maximum Backwash Pressure                |                   | kPa (psi)                         | 300 (43.5)                     |
| Normal Operating Trans-membrane Pressure |                   | kPa (psi)                         | 0–200 (0–29)                   |
| Operating Temperature Range              |                   | °C (°F)                           | 0–40 (32–104)                  |
| pH Range                                 | During Filtration |                                   | 1–10                           |
|                                          | During Cleaning   |                                   | 0–12                           |

\*Please contact Toray for operating manual and preliminary design, as capacity per module is highly dependent on feed water quality.



### Product Certifications & Compliances

- NSF/ANSI 61 for drinking water applications
- NSF/ANSI 419 to comply with the U.S. EPA's Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR), which allows membrane manufacturers to prove Cryptosporidium reduction.
- Association of Membrane Separation Technology of Japan



### Applications

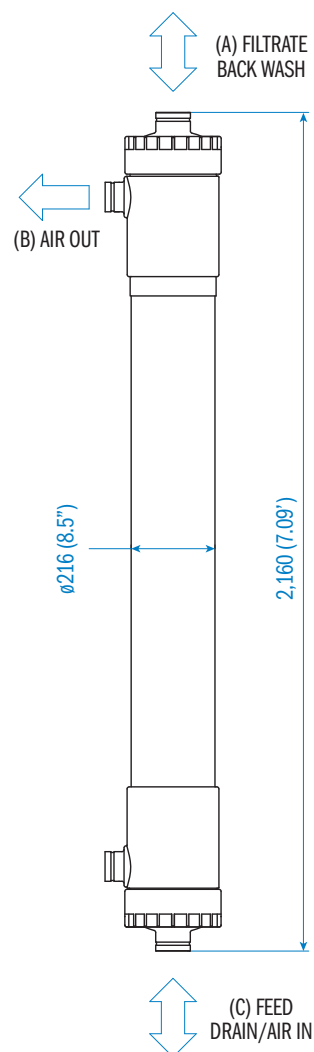
Drinking water, Industrial process water, Pretreatment for seawater RO desalination, Secondary and Tertiary wastewater

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| Dimensions and Weight      |                | Unit     | Value         |
|----------------------------|----------------|----------|---------------|
| Diameter                   |                | mm (in)  | 216 (8.5)     |
| Length                     |                | mm (ft)  | 2,160 (7.087) |
| Weight                     | Full of Water  | kg (lbs) | 92 (203)      |
|                            | After Draining | kg (lbs) | 49 (108)      |
| Connections                |                |          | Value         |
| (A) Filtrate Outlet        |                |          | 80A           |
| (B) Air Outlet             |                |          | 65A           |
| (C) Feed Water / Air Inlet |                |          | 80A           |
| Material Specifications    |                |          |               |
| Description                |                |          | Material      |
| Casing                     |                |          | uPVC          |
| Cap                        |                |          | uPVC          |
| Potting                    |                |          | Epoxy resin   |
| O-ring                     |                |          | EPDM          |

Please contact Toray for more detailed drawing and dimensions.



Toray accepts no responsibility for results obtained by the application of this information or the safety or suitability of Toray's products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each product combination for their own purposes.

All data may change without prior notice, due to technical modifications or production changes. Please be sure to inquire about the latest product specifications.