

# Installation Guidelines

## MAXIDYN<sup>®</sup>-Modules

### INSTALLING REPLACEMENT MEMBRANES IN STAINLESS STEEL HOUSINGS

1. Remove bare membrane from shipping bag and inspect ends for damage that may have occurred in transit and for burrs or other particulate that would interfere with boot seal installation. If burrs or particulate are found, place a dry, lintfree cloth over the palm of hand and grab end of membranes and rotate to remove material. If the membrane has been damaged during transit, measure length of damaged area from the end of membrane and contact Microdyn-Nadir to confirm if the membrane can be trimmed or if it must be discarded. Once the membrane has passed inspection, proceed with step 2.
2. Install rubber boot seal and expansion ferrule onto one side of bare membrane. This is accomplished by inserting tapered end of boot seal into the inside of the membrane and then rolling the 'wide' part back over the outside of the membrane. Using only a finger, push an expansion ferrule approximately  $\frac{1}{2}$  -  $\frac{3}{4}$ " into the end of membrane. **Note:** Do not expand ferrule into locked position at this time.
3. Slide the end of membrane without a boot seal into stainless steel housing on the side WITHOUT the permeate port. **Note:** Make certain to thoroughly lubricate installed boot seal with glycerine or other water soluble lubricant.
4. Push the membrane into the stainless housing using a soft mallet and a 7/8" dowel that has been deburred and had the edges rounded. Push the entire membrane through so that the opposite end is exposed from the housing enough to install the remaining boot seal.
5. Install rubber boot seal and expansion ferrule onto exposed side of membrane using same method described above. **Note:** Make certain to thoroughly lubricate installed boot seal with glycerine or other water soluble lubricant.
6. Push membrane back into the housing so that the membrane is centred inside the stainless steel housing. Make certain not to allow boot seals to "roll" or otherwise deform during installation. Improper installation will cause feed passage or no flow through membrane.
7. Use expansion needle-nose pliers to spread expansion ferrules into locked position. This will ensure that the boot seals remain in place and prevent the membrane from sliding inside housing.
8. Connect U-bends to housing and thoroughly rinse installed membranes with fresh water to remove lubricant. During rinse, inspect installation for leaks or other signs of improper installation.

### TROUBLESHOOTING

1. **PROBLEM:** Boot seal will not enter housing. **SOLUTION:** A second person is needed to grasp boot seal and compress at point of contact to help insertion into housing. **Note:** Some clients have made custom 'clamp' made from two halves of a 1" pipe and a Vies Grip that can be clamped over boot seal to pre-compress prior to entering housing.
2. **PROBLEM:** Boot seal has rolled or become deformed during installation. **SOLUTION:** Remove membrane and repeat installation process. Most likely cause is insufficient amount of lubricant on boot seals.
3. **PROBLEM:** U-bends will not fully seat on end of housing. **SOLUTION:** Membrane is not centered in housing. Using soft mallet and dowel, centre membrane.
4. **PROBLEM:** There is dirty permeate after start-up or there is no permeate production from membrane. **SOLUTION:** Either the boot seals has not been installed correctly, or the boot seal on the permeate port side has been slid too far in and has covered the opening to the permeate port. Remove membrane and reinstall membrane, making certain to use sufficient lubricant and to centre membrane.

Information given in this document is based on the current knowledge of MICRODYN-NADIR. We reserve the right to make modifications due to new developments at any time without prior notification.

The most up-to-date and valid documents can be found at [www.microdyn-nadir.de](http://www.microdyn-nadir.de). It is the user's responsibility to determine the correctness of MICRODYN-NADIR products for their intended use.

MICRODYN-NADIR behält sich das Recht vor, Angaben ohne vorherige Ankündigung anzupassen.  
We reserve the right to change specifications without prior notification.

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