



Katie Hobbs  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Karen Peters  
Director

## Notice of Proprietary Treatment Product Listing Pursuant to Arizona Administrative Code R18-9-A309(E) ADEQ LTF # 98102

### 1. Proprietary Treatment Product Name, Model, and Description

Product Name: Busse GT Membrane Bioreactor (MBR)

Models: Models GT 400, 500, 600, 800, 1,000, 1200

Description: The Busse GT Membrane Bioreactor (MBR) is a small-scale onsite wastewater treatment system utilizing membrane bioreactor technology. The bioreactor provides an aerobic environment where microorganisms present in the wastewater can remove soluble contaminants, using them as a source of energy for growth and production of new microorganisms. The wastewater treatment system operates on the basis of submerged microfiltration membranes. The Busse GT systems are comprised of a multiple tank system that receives raw domestic wastewater in the first tank with an aerator and a 3-micron sieve; the wastewater then travels to an identical second tank also equipped with an aerator and a 3-micron sieve, and then passes through the third and fourth tanks equipped with aeration and a Kubota MBR filtration unit. The treated wastewater is then discharged to the disposal system.

### 2. Manufacturer Information

Name: Busse West, LLC  
Address: 2619 West Glenlake  
City/State/Zip: Chicago, Illinois 606659  
Phone: (435) 659-0445  
Fax: N/A  
Website: [www.bussegt.com](http://www.bussegt.com)

### 3. Recognized Treatment Performance

Parameter	Statistical Measure	Value
5-Day Biochemical Oxygen Demand (BOD <sub>5</sub> ), mg/L	30-day arithmetic mean	3 mg/L
Total Suspended Solids (TSS), mg/L	30-day arithmetic mean	6 mg/L
Total Nitrogen as Nitrogen (TN), mg/L	five-month arithmetic mean	16 mg/L
Total Coliform, Colony Forming Units/100mL	95th percentile	1,000 (Log <sub>10</sub> 3)

#### 4. Product Applicability and Limitations for Use for a Recognized General Permit Technology

**Applicability:** This listing is for the Busse GT product and associated models and is listed as an aerobic system treatment technology specified in A.A.C. R18-9-E315.

**Limitations:**

- A.** The Busse GT must receive wastewater that meets the standard of typical sewage with a BOD<sub>5</sub> = 380 mg/l maximum and TSS = 430 mg/l maximum R18-9-101(46). Additionally, it must meet oil and grease of ≤ 75 mg/L requirement contained in R18-9-101(46).
- B.** This approval listing EXCLUDES appurtenances which are considered to be an alarm, control panel, control, switch, timer, wiring, other electrical devices, and installation components; which are subject to both the manufacturer specifications and any more restrictive requirement in 18 A.A.C. 9, Article 3.
- C.** This listing is for the treatment of wastewater that meets the definition of typical sewage in R18-9-101(46).
- D.** The product is an above ground installation that must be installed in a secured insulated shed or in a utility room if installed in a basement.
- E.** The product can be installed below ground in a housing or vault.
- F.** The product must be vented at all times and all designs require venting.
- G.** The manufacturer recommends inspection of the Busse GT product once per year for the annual service, maintenance and membrane replacement.
- H.** The requirements of R18-9-A312 (B)(4)(e) have been met, first, by providing a backup generator or an overflow tank (that would accompany the 24-hour Design Flow), which would cover a power outage; second, to address a pump outage, a secondary backup pump will be supplied for each primary pump used.
- I.** The use of a garbage disposal with this product is not recommended.
- J.** Each Busse GT installation must contain the marble tiles as certified through NSF.
- K.** ADEQ approves the Busse GT Design & Installation Manual, dated October 2023, for this proprietary product. In addition, it should be noted that the Arizona Administrative Code (AAC) states the following: “if manufactured components are used, an applicant shall design, install, and operate the on-site wastewater treatment facility following the manufacturer’s specifications” as per R18-9-A312(F)(2).
- L.** The product, including the pretreatment works, is subject to A.A.C. R18-9-A312(F)(2) through (4).
- M.** The following table gives the allowable design flow for each treatment facility model:

Manufacturer’s Model Number	Maximum Design Flow (gallons per day) per R18-9-A309(B)(3)
Busse GT 400	400
Busse GT 500	500
Busse GT 600	600
Busse GT 800	800
Busse GT 1000	1000
Busse GT 1200	1200

**5. Alternative Criteria and Exceptions for Use under the Recognized General Permit Technology**

<b>Alternative:</b>	None
<b>Exception:</b>	<p>a. When the wastewater does not meet the definition of typical sewage as defined in R18-9-101(46), a Manufacturer’s Design Review Report shall be submitted for review and approval along with the Notice of Intent to Discharge. This Design Review Report shall specify component capacities, control settings, and supplemental installation &amp; operational practices.</p>

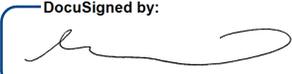
**6. Documents Used as the Basis for this Proprietary Treatment Product Listing Notice**

Application for Treatment Product Listing:	February 14, 2023
3 <sup>rd</sup> Party Test data:	<ul style="list-style-type: none"> <li>- Onsite Wastewater Technology Report – <i>Busse Innovative Systeme GmbH Model MF-B-400 Wastewater Treatment System</i> dated June 2009 for the NSF 40 Report</li> <li>- Onsite Wastewater Technology Report – <i>Busse Innovative Systeme GmbH Model MF-B-400 Wastewater Treatment System</i> dated July 2009 for the NSF 245 Report</li> </ul>
Installation Instructions:	Busse Commissioning Operation and Maintenance Manual dated October 2023
Manufacturer’s Warranty:	Busse West Warranty submitted February 14, 2023
Manufacturer’s Specifications:	Busse Commissioning Operation and Maintenance Manual dated October 2023
Manufacturer’s Design Calculations & Drawings:	Final Drawings submitted October 25, 2023
Operation & Maintenance Manual:	Busse Commissioning Operation and Maintenance Manual dated October 2023
Owner’s Manual:	Busse West Owner’s Manual Type MF Version October 2023

**7. Terms and Conditions for this Proprietary Treatment Product Listing Notice**

<p>A. This Notice of Proprietary Treatment Product Listing shall remain in effect until any of the following occurs:</p> <ol style="list-style-type: none"> <li>1. Applicable provisions of the Arizona Administrative Code, Title 18, Chapter 9, Article 3 are revised;</li> <li>2. Documents used for the basis of this listing are altered or modified;</li> <li>3. Manufacturer claims which are relied upon for this listing are later determined to contain an error or omission;</li> <li>4. The manufacturer requests termination of this listing;</li> <li>5. A listing error or omission is identified; or</li> <li>6. The manufacturer and ADEQ mutually agree to reissue this notification to incorporate correction or update for any reason.</li> </ol> <p>B. This Notice of Proprietary Treatment Product Listing does not apply when the:</p> <ol style="list-style-type: none"> <li>1. Listed proprietary treatment product is modified or operated in a manner that conflicts with Arizona law or the documents used for the basis of this listing action in Section 6.</li> <li>2. Listed proprietary treatment products are used in a manner that cannot achieve the performance in Section 3 above.</li> </ol>
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- C. This Notice of Proprietary Treatment Product Listing applies solely to the product specified in Section 1.
- D. The manufacturer is responsible for notifying ADEQ of changes to the contact information at the following address:  
Attention: Product Listing Supervisor  
Engineering Review Desk,  
1110 West Washington Street  
Phoenix, AZ 85007.
- E. The listing by ADEQ of any proprietary product or service is not an endorsement by ADEQ or the State of Arizona. ADEQ does not endorse, represent, guarantee, warranty or defend the use of any product which is authorized for use pursuant to A.A.C. R18-9-A309(E). Product providers are a direct source unrelated to ADEQ or the State of Arizona. Use of any listed product is at the user's risk and the State assumes no liability.

<b>Signature:</b>	DocuSigned by:  B394CB7054FD416...	<b>Date Signed:</b>	10/30/2023
<b>Title:</b>	Randall Matas, Deputy Director – Water Quality Division		

ADEQ LTF # - 98102; ADEQ File No. 20230079  
Reviewer: LAL