



Douglas A. Ducey
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera
Director

Notice of Proprietary Treatment Product Listing Pursuant to Arizona Administrative Code R18-9-A309(E) ADEQ LTF #72157

1. Proprietary Treatment Product Name, Model, and Description

Product Name: Norweco Singulair

Models: R3 System 500 GPD, 750 GPD, 1000 GPD 1200 GPD, 1500 GPD

Description: The Norweco Singulair Model R3 system is a two-tank treatment unit, available in concrete and HDPE (for the Green 500 GPD unit), which includes pretreatment, aeration, clarification and effluent filtration chambers. This listing is applicable for design flows less than 3,000 gpd.

2. Manufacturer Information

Name: Norweco, Inc.
Address: 220 Republic St.
City/State/Zip: Norwalk, Ohio
Phone: (419) 668-4471
Fax: (419) 663-5440
Website: www.norweco.com

3. Recognized Treatment Performance

Parameter	Averaging Time	Parameter Value for Averaging Time
5-Day Biochemical Oxygen Demand (BOD ₅), mg/l	30-day arithmetic mean	7
Total Suspended Solids (TSS), mg/l	30-day arithmetic mean	9
Total nitrogen as nitrogen (TN), mg/l	five-month arithmetic mean	15
Total coliform, colony forming units/100ml	95th percentile	300,000*

*Default value due to lack of submitting 3rd party data per R18-9-E315(B).

Main Office

1110 West Washington Street • Phoenix, AZ 85007
(602) 771-2300

Southern Regional Office

400 West Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

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

Applicability: This listing is for only the Norweco Singulair Model R3 treatment technology and is listed as an aerobic treatment technology specified in A.A.C. R18-9-E315.

Limitations:

- A. This listing is for the treatment of wastewater that meets the definition of typical sewage in R18-9-101(42) from homes and small businesses.
- B. The product, including the pretreatment works, is subject to A.A.C. R18-9-A312(F)(2) through (4).
- C. The product shall conform to the following:

Maximum Design Flow (gallons per day) per R18-9-A309(B)(3)	Manufacturer's Model Number	Materials of Construction	Manufacturer requires external pretreatment chamber
500	Singulair Bio-Kinetic Wastewater Treatment System Model R3 – 500 GPD	Concrete	None required
750	Singulair Bio-Kinetic Wastewater Treatment System Model R3 – 750 GPD	Concrete	None required
1,000	Singulair Bio-Kinetic Wastewater Treatment System Model R3 – 1000 GPD	Concrete	Minimum requirement per manufacturer is 1,000 gallons capacity, 15 gallons per inch of liquid level and 12 inches of freeboard.
1,200	Singulair Bio-Kinetic Wastewater Treatment System Model R3 – 1250 GPD	Concrete	Minimum requirement per manufacturer is 1,250 gallons capacity, 16 gallons per inch of liquid level and 12 inches of freeboard.
1,500	Singulair Bio-Kinetic Wastewater Treatment System Model R3 – 1500 GPD	Concrete	Minimum requirement per manufacturer is 1,500 gallons capacity, 22 gallons per inch of liquid level and 12 inches of freeboard.
500	Singulair Green Wastewater Treatment System Model R3 – 500 GPD	HDPE	None Required

- D. This listing is only for the technology approved in accordance with A.A.C. R18-9-E315 and does not include other technology/product including the AT 1500 UV disinfection system.
- E. This listing does not certify the Norweco Singulair R3 wastewater treatment system as a water reuse system.
- F. Anti-flotation systems must be installed where high water is a concern.
- G. The tank must be located in an area where NO VEHICLES of any size will operate over the tank per Manufacturer's requirement.

H. This listing DID NOT include the evaluation of appurtenances which are considered to be “other manufactured materials and components” such as 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.

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

Alternative:	None
Exception:	<p>a. When the wastewater does not meet the definition of typical sewage as defined in R18-9-101(42), 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 & operational practices.</p>

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


Application for Treatment Product Listing:	June 22, 2018
3 rd Party Test data:	North American Testing, LLC, December 4, 2017
Supplemental Report:	Product Evaluation Supplemental Certification Report: August 28, 2018
Installation Instructions:	Norweco Service Pro Installation and Instructions, June 22, 2018
Manufacturer’s Warranty:	Singulair R3 Limited Warranty, June 22, 2018 Singulair R3 Lifetime Warranty and Exchange Program, June 22, 2018
Manufacturer’s Specifications:	Norweco Singulair Model R3 General Specifications, June 22, 2018
Manufacturer’s Design Calculations & Drawings:	Norweco Singulair Model R3 drawings, June 22, 2018
Owner’s Manual	Norweco Singulair Model R3 Owner’s Manual, June 22, 2018

NOTE 1 – This document is an integral part of this Proprietary Treatment Product Listing Notice and is included in the Arizona Department of Environmental Quality Proprietary Product List website.

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

- A. This Notice of Proprietary Treatment Product Listing shall remain in effect until any of the following occurs:
1. Applicable provisions of the Arizona Administrative Code, Title 18, Chapter 9, Article 3 are revised;
 2. Documents used for the basis of this listing are altered or modified;
 3. Manufacturer claims which are relied upon for this listing are later determined to contain an error or omission;
 4. The manufacturer requests termination of this listing;
 5. A listing error or omission is identified; or
 6. The manufacturer and ADEQ mutually agree to reissue this notification to incorporate correction or update for any reason.

- B. This Notice of Proprietary Treatment Product Listing does not apply when the:
 - 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.
 - 2. Listed proprietary treatment products are used in a manner that cannot achieve the performance in Section 3 above.
- C. This Notice of Proprietary Treatment Product Listing applies solely to the product specified in Section 1 above.
- 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.

Signature:  David Dunaway	Date Signed: 10/1/18
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Title: Manager, Groundwater Protection Value Stream
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ADEQ LTF # - 72157

Reviewer: Linneth López, Raymond Morgan