

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 # 80218

1. Proprietary Treatment Product Name, Model, and Description

Product Name: Quanics AeroCell Recirculating Media Filter

ATS-SCAT-4-AC-C200, ATS-SCAT-6-AC-C300, ATS-SCAT-8-AC-C500,
ATS-SCAT-16-AC-C2400, ATS-540-AC-N, ATS-1060-AC-N, ATS-1530-
AC-N, ATS-NS500-AC-N, ATS-NS750-AC-N, ATS-NS1000-AC-N, ATS-
Models: NS500-80/20-AC-N, ATS-NS750-80/20-AC-N, ATS-NS1000-80/20-AC-N,
ATS-NS500-2-80/20-AC-N, ATS-NS500-3-80/20-AC-N, and ATS-NS750-2-
80/20-AC-N

Description: The Quanics AeroCell recirculating fixed film media filter consists of fiberglass or plastic tank(s) containing a pre-determined amount of open cell foam media. The process consists of four stages in the treatment process. The treatment begins in the pretreatment stage consisting of the septic tank in stage one and the pump tank in stage two. In the third stage, the effluent is sprayed over the media using specialized spray nozzles to evenly distribute wastewater and achieve treatment. The fourth and final stage consists of the recirculation device where treated effluent flows through an 80/20% recirculation device where further treatment occurs before disposal of the effluent. This listing is applicable for design flows less than 24,000 gpd.

2. Manufacturer Information

Name: Quanics_(Anua)
Address: PO Box 77457
City/State/Zip: Greensboro, NC
Phone: 336-547-9338
Fax: 336-547-8559
Website: www.anuainternational.com

Main Office

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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	3
Total Suspended Solids (TSS), mg/l	30-day arithmetic mean	2
Total nitrogen as nitrogen (TN), mg/l	five-month arithmetic mean	9
Total coliform, colony forming units/100ml	95th percentile	163 (Log ₁₀ 2.2)

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

Applicability: This listing is only for the Quanics AeroCell listed as a textile filter treatment technology specified in A.A.C. R18-9-E312. This product shall be used in conjunction with a septic tank for pretreatment.

Limitations:

- A. This listing is for the treatment of wastewater that meets the definition of typical sewage in R18-9-101(42);
- B. The Quanics AeroCell must receive wastewater that meets the definition of typical sewage in R18-9-101(42) and is treated to a level equal to or better than that specified in R18-9-E302(B);
- C. The Quanics AeroCell shall be used in conjunction with a septic tank for pretreatment that meets the requirements of R18-9-A314;
- D. This product shall be used in conjunction with a pump tank (recirculation tank) which must be one times the design flow rate and which meets the design requirements in R18-9-E304(D)(3).
- E. The product, including the pretreatment works, is subject to A.A.C. R18-9-A312(F)(2) through (4).
- F. The product shall conform to the following:

Manufacturer's Model Number	Maximum Design Flow (gallons per day) per R18-9-A309(B)(3) (Per Pod)	Media Volume per Pod (cubic feet)	Media Loading Rate (gallons per day per cubic foot)	Treatment Unit Housing	Recirculation Tank Minimum Capacity (gallons)
ATS-SCAT-4-AC-C200	188	32	5.88	Quanics FRP	1.0x Design Flow
ATS-SCAT-6-AC-C300	312	53	5.88	Quanics FRP	1.0x Design Flow
ATS-SCAT-8-AC-C500	500	85	5.88	Quanics FRP	1.0x Design Flow
ATS-SCAT-16-AC-C2400	2,352	400	5.88	Quanics FRP	1.0x Design Flow
ATS-540-AC-N	500	85	5.88	Infiltrator IM-540 Tank	1.0x Design Flow
ATS-1060-AC-N	800	136	5.88	Infiltrator IM-1060 Tank	1.0x Design Flow

ATS-1530-AC-N	1,500	255	5.88	Infiltrator IM-1530 Tank	1.0x Design Flow
ATS-NS500-AC-N	500	85	5.88	Norwesco-Snyder Next Gen D2 500	1.0x Design Flow
ATS-NS750-AC-N	660	112	5.88	Norwesco-Snyder Next Gen D2 750	1.0x Design Flow
ATS-NS1000-AC-N	800	137	5.88	Norwesco-Snyder Next Gen D2 1000	1.0x Design Flow
ATS-NS500-80/20-AC-N	500	85	5.88	Norwesco-Snyder Next Gen D2 500	1.0x Design Flow
ATS-NS750-80/20-AC-N	660	112	5.88	Norwesco-Snyder Next Gen D2 750	1.0x Design Flow
ATS-NS1000-80/20-AC-N	800	136	5.88	Norwesco-Snyder Next Gen D2 1000	1.0x Design Flow
ATS-NS500-2-80/20-AC-N	1000	170	5.88	Norwesco-Snyder Next Gen D2 500	1.0x Design Flow
ATS-NS500-3-80/20-AC-N	1500	255	5.88	Norwesco-Snyder Next Gen D2 500	1.0x Design Flow
ATS-NS750-2-80/20-AC-N	1320	224	5.88	Norwesco-Snyder Next Gen D2 750	1.0x Design Flow

- G.** Effluent from the Quanics AeroCell can be dispersed by gravity to the distribution box and then by gravity to the dispersal field. In addition, effluent can be dispersed to the disposal works with a pump or siphon to a distribution box followed by gravity discharge to the disposal works. The discharge of a pump or siphon to a distribution box followed gravity discharge to the disposal works has been determined to be equal to that of a pump and pressure distribution to the disposal works (no distribution box used) as specified in R18-9-E4304. An A312G submittal will be required to obtain approval of the design details to use a pump or siphon to a distribution box followed by gravity discharge to the disposal works. In addition, the A312G will be used in conjunction with the type 4.12 general permit application to gain approval to use this method of discharge to the disposal works instead of using a pressurized discharge to the disposal works.
- H.** If the installation of a pressure distribution system will occur, then the Notice of Intent to Discharge and other submittal documentation shall include the required materials listed in R18-9-E304. Pressure dosing of the Quanics AeroCell effluent, if used, shall be governed by the requirements in R18-9-E304 general permit.
- I.** Effluent disposal shall be based upon trench soil absorption rates.
- J.** In extreme cold weather conditions, the force main shall be designed to drain back after each cycle and the drain back cycle should be factored into the dosing calculations per the manufacturer's requirements.
- K.** This 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.
- L.** The requirement of R18-9-A312(B)(4)(e) has been met by providing twenty four hour emergency storage of wastewater within the unit itself.
- M.** ADEQ does not approve design or operation manuals for proprietary products. However, "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) unless a conflict arises as specified in R18-9-A312(F)(4).

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

Alternative:	None
Exception:	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.


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

Application for Treatment Product Listing:	Tab 1: Product Listing Application and Product Description Received May 9, 2019
Product Information:	Tab 2: Product Information Received May 9, 2019
3 rd Party Test data:	Tab 10: Wastewater Technology NSF International Final Report: Quanics AeroCell ATS-SCAT-8-AC-C500 Wastewater Treatment System January 2005 Received May 9, 2019
Installation Instructions:	Tab 9: Quanics Engineering Water Solutions – Installation Manual <i>Revised December 2005</i> Received May 9, 2019
Manufacturer’s Warranty:	Tab 3: Quanics Warranty – Received May 9, 2019
Manufacturer’s Specifications:	Tab 4: Quanics Technical Drawings – Received May 9, 2019 Tab 5: Pretreatment Requirements/Specifications or Limitations - Received May 9, 2019
Manufacturer’s Design Calculations & Drawings:	Tab 6: Engineering Details/Calculations, Technical Specifications Advanced Treatment System Technical Manual Received May 9, 2019
Manufacturer’s Design Manual:	Tab 11: Quanics Homeowners Manual – Received May 9, 2019 Quanics Residential Design Guide – 2018 Received May 9, 2019
Operation & Maintenance Manual:	Tab 8: Quanics Engineering Water Solutions - Operation & Maintenance Manual <i>Revised August 2007</i> Received May 9, 2019
Supplemental Documentation: (Supporting updated product listing)	NSF/ANSI Standard 40 – Request to Approve Norwesco-Snyder tanks to serve as a housing for the AeroCell and BioCoir treatment units – NSF Project 10124302 Received January 24, 2020

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"> 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:	 Trevor Baggione,	Date Signed:	3-25-20
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Title:	Water Quality Division Director
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ADEQ LTF # - 80218
 Reviewer: LAL, Westland Resources, Inc. (Original Review)
 Reviewer: LAL (Update to PPL)