

**NOMADIC™ RC Mobile Sewage Treatment
Residential Strength in a Cargo Container
General Specifications for Attached Growth Biological Reactor Models**

General

The NOMADIC™ RC Attached Growth Biological Reactor model system shall consist of:

1. a modified cargo shipping container or multiple containers
2. an epoxy coated, multi-chamber steel tank,
3. settling,
4. Attached Growth Biological Reactor wastewater treatment system,
5. an ultra-violet light disinfection system,
6. a effluent discharge systems.

Cargo Container

The cargo shipping container shall be modified for man door access for maintenance personnel, service access hatches on the top of the container, and openings for fresh air inlet, sewage inlet, electrical conduit inlet and final effluent discharge.

The cargo container shall be fitted with steel skid plates, roll on / roll off bars and protective bollards. The container shall be re-painted in forest green colour or other colour as requested by the buyer.

The container shall be insulated and heated.

Operating Conditions

Each model number shall state the maximum number of persons that the system as designed to treat for the industrial / work camp.

Each person shall generate or contribute to not more than 227.3 litres of wastewater per day. The influent wastewater shall not have a combined sewage strength not exceeding a BOD5 of 250 mg/l, TSS of 250 mg/l, Fats, oils and greases of 35 mg/l and have a pH of 6.5 to 7.5 at all times.

Fats, oils and grease source control are solely the responsibility of the user of the NOMADIC™ RC mobile wastewater treatment system to ensure that the level of as set down above is not exceeded.

Flow Equalization system to be supplied by others for the raw sewage wastewater entering into the NOMADIC™ is recommended to be in accordance with the following:

- a. Volume per dose is not to exceed 7 ½ % of the total daily design flow
- b. Rest period per dose is not to be less than 15 minutes
- c. Volume per minute is not to exceed the allow limit of the ultra-violet light system

The effluent quality from the NOMADIC™ mobile wastewater treatment system shall have a BOD5 of < 20 mg/l, TSS of < 20 mg/l and a pH of 6.5 to 7.5

Multi-Chamber Steel Tank

The steel tank shall be coated inside and outside, including all internal steel pipe works, with an epoxy coating that has a ten (10) year warranty suitable for use in a sewage wastewater vessel.

Each of the steel tank's chambers shall have a volumetric working capacity in accordance with the requirements as determined by Pinnacle Environmental Technologies Inc. for the corresponding NOMADIC™ RC model for the respective daily design flow rate.

Chambers used for aeration, settling or the AGRB treatment shall be directly exhaust vented to the exterior of the cargo container. A chamber of a steel tank in each of the cargo containers shall hold the

NOMADIC™ RC Mobile Wastewater Treatment System – General Specifications - AGRB

Discharge pumps and, shall not be enclosed unless a sealed hatch cover is placed directly over discharge pumps.

Each chamber of the steel tank shall have a 100 mm diameter drain pipe connected to a brass knife/gate valve placed on the exterior of the steel tank complete with cam-lock fitting.

Settling Chamber

The settling chamber shall have a volumetric capacity of not less than one day of the daily design sewage flow and shall be fitted with outlet baffle to flow by gravity into the AGRB chamber.

Attached Growth Biological Reactor (AGRB)

The attached growth biological reactor shall be a submersed self-cleaning plastic media with an airlift assembly or multiple airlift assemblies encased in a plastic liner.

The attached growth biological reactor shall be accredited under the National Standard of Canada system and the Standards Council of Canada or the American National Standards Institute as meeting either of the NSF International Standard 40, Class 1 or the CAN/BNQ 3680.

The AGRB shall be one of MicroFAST® as solely available from Pinnacle Environmental Technologies Inc. in Langley, British Columbia.

The AGRB shall be supplied and installed by Pinnacle Environmental Technologies Inc. into the NOMADIC™ RC system.

The AGRB chamber shall have a volumetric capacity in accordance with the requirements as determined by Pinnacle Environmental Technologies Inc. for the corresponding daily design flow rate for the respective NOMADIC™ RC systems.

Effluent Discharge System

All effluent discharge system shall be an on-demand duplex alternating ½ HP, 2” solids handling pumps with liquid level sensors for pump on, pump off and high level alarm.

A pump controller shall be installed in accordance with the requirements of Pinnacle Environmental Technologies Inc. and shall have event recording capabilities to determine actual daily flow rates.

Electrical

The NOMADIC™ RC mobile wastewater treatment system shall be, at the Pinnacle factory, electrically wired by a Licensed Electrical Contractor who holds a “red seal” accreditation for Canada.

Electrical work to be conducted by qualified electrician at the location of the placement of the NOMADIC™ RC mobile treatment system shall be responsible for any electrical permits or compliance to local codes, bylaws or legislation in regards to connection and use of the NOMADIC™ RC system

Warranty

The AGRB, all air blowers and controls are warranted against defects in material or workmanship for one (1) year from date of shipping from the factory. The steel tank is warranted against defects in material or workmanship for one (1) year from date of shipping from the factory. The coating on the steel tank is warranted for ten (10) years from date of shipping from the factory.

Cargo Container is a one-time used container and has no warranty from original manufacturer.

Ultra-Violet Light system and all liquids handling pumps are warranted by their respective manufacturers which is generally one (1) year from date of shipping from the factory.