

# HIGH STRENGTH WASTEWATER COMMERCIAL SEPTIC SYSTEMS

## White Knight Microbial Inoculator Generator™

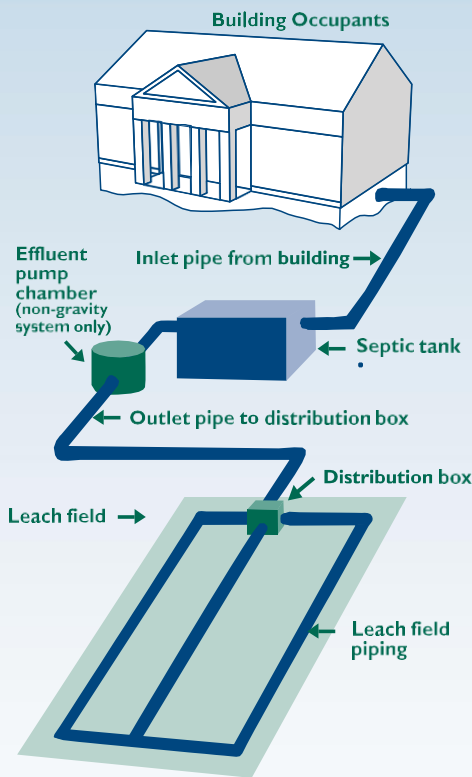


### Problem

Organic clogging of a commercial septic system area results in the hydraulic failure and/or surfacing of untreated wastewater. This can occur in commercial systems in as little as 3 years due to biological clogging.

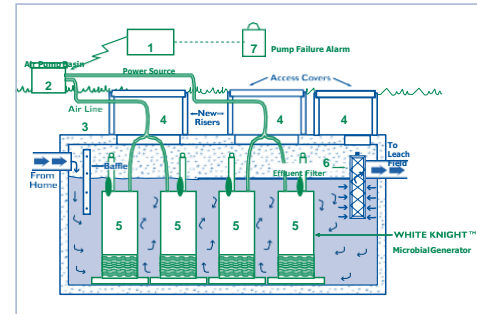
### Solution

By converting the septic tank to an aerobically enhanced biological treatment vessel with the patented White Knight MIG™ selected bacteria are introduced, generated and released. The patented IOS-500™ bacterial matrix provides the select bacteria which consume the wastes entering the tank, this results in an effluent that is cleaner and enriched with these beneficial bacteria and oxygen. Carried out into the leach area by the effluent stream these select bacteria continue to consume the excess wastes that previously clogged the system.



### White Knight MIG™ Treatment System

- 1 110/120 AC volt Power Source
- 2 Weatherproof Air Pump Basin used for outdoor air pump when required
- 3 Air line provides oxygen directly to White Knight MIG™
- 4 Septic tank service riser
- 5 Multiple high-performance White Knight Microbial Inoculator/Generators™ Model WK-78 installed directly in septic tank for optimized operation, maintenance and scalability for high-volume customer usage patterns
- 6 Effluent outlet filter to retain non-biodegradable materials
- 7 Weatherproof enclosure with Pump Failure Alarm



### What is biological clogging?



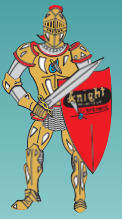
- 1 Biological clogging occurs over time because the excess waste builds up in the soil pore space creating a clogging condition in the leach field.
- 2 As the clogmat builds, the trenches fill with wastewater (i.e., effluent).
- 3 Eventually effluent from the septic tank cannot pass into the surrounding soil where aerobic bacteria can purify it, and the septic system fails. Noxious septic waste surfaces over the leach field or backs up into the building as a result of septic system failure.

### Benefits

- Typically about 33 to 50% of the cost of an "in kind" replacement.
- May be 25% of the cost of an "up to code" replacement system
- Minimal disturbance and destruction of the landscape.
- Fecal Coliforms and nitrogen are significantly reduced.
- Effluent quality is dramatically improved with a BOD and TSS primarily consisting of the introduced microorganisms.
- Overall Carbon footprint is far less than a conventional system replacement making this an environmentally friendly green technology.
- Provides a permanent solution.
- Approved and accepted for use by state and local regulatory authorities.
- Real-time performance monitoring system available.



# White Knight Microbial Inoculator/Generator™ For Commercial Applications



## White Knight™ WK-150 & WK-200 Specifications

The White Knight MIG™ is an advanced bioremediation solution for onsite wastewater treatment systems and may also be used to enhance the capabilities of other treatment equipment. The unit is compact in size and easily fits into either new or sound existing septic system tanks. The WK-150 & WK-200 has been specifically designed to utilize the patented IOS-500™ bacterial matrix from International Organic Solutions. The bacteria matrix is introduced into the MIG, and the bacteria multiply rapidly and consume organic waste within the septic tank. Effluent leaves the septic tank along with the IOS-500™ specialized microbes and continue to consume deposited organic compounds, restoring soil particle pore space and natural drainage pathways.

## Model Numbers and Typical Applications

- WK-150 Small commercial applications
- WK-200 Larger, custom design, or institutional applications
- WK-XXX Multiple WK MIG Columns scalable to fit any application

## Treatment units specifications

Model #	Maximum recommended BOD loading (lbs./day)	Recommended Minimum Tank Size (gallons)	# Media Towers	Media Tower Size (dia" x height")	Minimum Air Pipe size	Diffuser Air Flow (CFM@2 psi)
WK-150	12	3000	3	16" x 27.5"	3/4"	7
WK-200	18	4000	4	16"x 27.5"	3/4"	9
WK-xxx	varies	varies	varies	custom	3/4"	varies

## Air supply specifications

Model #	Output @ 2 psi (CFM)	Watts	Amps	Volts AC	Pump Dimensions	Basin Dimensions
WK-150	7	92	2.1	110/120	8.94" x 7.05" x 8.59"	13" H x 24" L x 16" W
WK-200	9	408	3.4	110/120	10.8" x 7.87" x 8.74"	13" H x 24" L x 16" W
WK-1xx	Call for Specifications					

## Controller specifications

Model #	Voltage	Amps Max	Failure Sensing	Alarm Type	Overload Protection (amps)	Switching
WK-150	110/120	8	Pressure drop +/- or float	Visual and Audible	8	Normal/ Silence only
WK-200	110/120	8	Pressure drop +/- or float	Visual and Audible	8	Normal/ Silence only

**DEALER INFORMATION**

**Knight Treatment Systems, Inc.** • 281 Co. Rt. 51A, Oswego, New York, 13126  
1-800-560-2454 • [www.knighttreatment.com](http://www.knighttreatment.com)

Headquartered in Oswego, NY., Knight Treatment Systems, Inc. is the national supplier of the White Knight Microbial Inoculator Generator™, a patented emergent technology utilized for the enhanced biological treatment of wastewater and the recovery of organically clogged absorption systems. The White Knight MIG™ is available through and serviced by a network of factory authorized and trained onsite wastewater treatment professionals.

