

ENHANCED MICROBIAL AUGMENTATION FOR NEW SEPTIC SYSTEMS

White Knight Microbial Inoculator Generator™

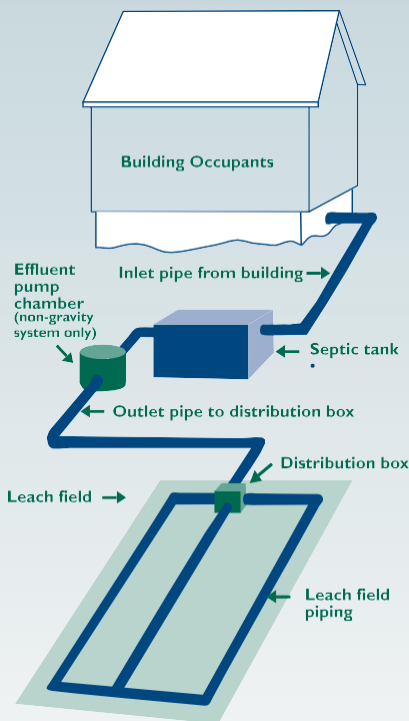


THE ISSUE

It is generally accepted that new residential septic systems have an average life expectancy of 15 to 20 years. One of the most prominent causes of septic system failure is organic clogging of the absorption system. When the absorption system fails, the common solution is to physically have it replaced, usually at a high cost and inconvenience to the property owner.

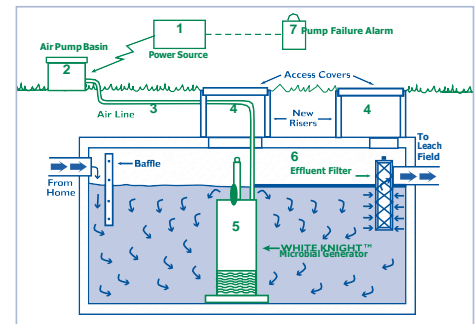
PROACTIVE PREVENTION

By installing the White Knight MIG™ as a preventive measure, it eliminates organic clogging and converts the traditional septic system into a biologically enhanced wastewater treatment system. With proper maintenance one can extend the life of a septic system almost indefinitely. By using the patented White Knight MIG™ and IOS-500™ bacterial matrix, specialized aerobic bacteria are introduced and released, resulting in an effluent that is cleaner and oxygen enriched. When carried out into the absorption system these bacteria continue to feed on any residual waste preventing biological clogging between the soil particles allowing for maximum natural drainage of the soil.



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 White Knight Microbial Inoculator/Generator™ Model WK-40 installed directly in the septic tank for improved operation and ease of maintenance
- 6 Effluent outlet filter to retain non-biodegradable materials
- 7 Weatherproof enclosure with Pump Failure Alarm



Benefits:

- Environmentally Beneficial! Assists with the protection of ground and surface waters by providing enhanced biological treatment of the wastewater before it enters the soil. Fecal Coliform significantly reduced and Total Nitrogen typically reduced by about 50%.
- Promotes Peace of Mind! Routinely maintained by certified service providers so property owners need not worry about unexpected nor untimely septic system failures.
- Protection of Investment! Replacing a failed septic system is an expensive and disruptive event. Eliminates the potential of organic clogging of the absorption system when properly maintained.
- May Qualify for System Size Reductions! Approved and accepted by many state and local regulatory authorities, some jurisdictions will grant overall absorption system size reductions and ground water separation credits based on their respective regulations when incorporated into the wastewater treatment system design.



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 home as a result of septic system failure.

White Knight Microbial Inoculator/Generator™

Typical Applications



White Knight™ WK-40 & WK-78 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-40 & WK-78 are specifically designed to utilize the patented IOS-500™ bacterial matrix from International Organic Solutions. The bacterial 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.

White Knight Microbial Inoculator Generator™ US Patent Number 7658851

Model Numbers and Typical Applications

WK-40 Residential applications

WK-78 Large Residences & Small Commercial applications

WK-xxx Commercial, Institutional or Municipal applications

Treatment Unit Specifications

Model #	Maximum recommended BOD loading (lbs/day)	Minimum Tank Size (gallons)	# of Media Towers	Size of Media Tower (dia" x height")	Minimum Air Pipe size	Recommended maximum number of bedrooms (Approx)	Diffuser Air Flow (CFM)
WK-40	4	1000	1	16" x 27.5"	½"	4	1
WK-78	6	1500	2	16" x 27.5"	¾"	8	2
WK-xxx	varies	varies	varies	16" x 44"	¾"	varies	varies

Air Supply Specifications

Model #	Output @ 2 psi (CFM)	Watts	Amps	Volts	Pump Dimensions	Basin Dimensions
WK-40	1.58	96	0.8	110/120	6.83" x 8.09" x 7.79"	13" H x 24" L x 16" W
WK-78	3.2	192	1.6	110/120	8.94" x 7.05" x 8.59"	13" H x 24" L x 16" W
WK-xxx	Call for Specifications					

Controller Specifications

Model #	Voltage	Amps Max	Failure Sensing	Alarm Type	Overload Protection (amps)	Switching
WK-40	110/120	8	Pressure drop +/- or float	Visual and Audible	8	Normal/ Silence only
WK-78	110/120	8	Pressure drop +/- or float	Visual and Audible	8	Normal/ Silence only
WK-xxx	110/120	varies	Pressure drop +/- or float	Visual and Audible	varies	Normal/ Silence only

DEALER INFORMATION

Knight Treatment Systems, Inc. • 281 Co. Rt. 51A, Oswego, New York, 13126
1-800-560-2454 • 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.

