

Biological Systems

Water Treatment Systems



Biological Recycle Systems/Clarifier



A CLARIFIER ALLOWS FOR GREATER SETTLING AND REMOVAL OF ACCUMULATED SOLIDS IN WASTEWATER BEFORE TREATMENT. THIS PRETREATMENT MAKES IT EASIER FOR WATER TREATMENT SYSTEMS TO OPERATE EFFECTIVELY.

FEATURES

- Cone-shaped tank for easy handling of accumulated solids
- Quality recycled wash water without common odor problems
- Easy operation and maintenance
- Easily accessible pumps
- ETL listed control panel
- Heavy-duty, corrosive-resistant and UV-resistant poly-skid

APPLICATIONS

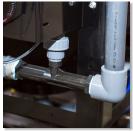
- Golf Courses Designed to handle equipment wash water for various golf course configurations
- Solid-Waste Haulers Able to effectively treat vehicle wash water, like that from garbage trucks
- Food Processing Plants Pretreatment of a broad range of food processing wastewater before discharging
- Petro-Chemical Capable of treating waste streams containing multiple, organic particulate matter
- Anything with organic compounds in wastewater

CERTIFICATION

• ETL Certified - US and Canada



Peristaltic pump is self priming for passive automatic liquid microbe injection



Mazzei® venturi air injection system sustains beneficial aerobic microbes while preventing bacteria from turning odorous and anaerobic



ETL listed NEMA-4 rated corrosion-proof control panel for safe and reliable operation

MODEL NUMBER	FLOW RATE	CLARIFIER TANK	MEDIA	SUMP PUMP (INCLUDED)	TRANSFER PUMP	POWER REQUIREMENTS	DIMENSIONS (LxWxH)	SHIP WT.
BIO-15-0M10*	0-15 GPM	600 gallons	1,300 sq. ft.	1.0 HP	3/4 HP	230V, 1Ø, 20.0A	5x8x9.16ft.	1250 lb.
BIO-15-0M30*	0-15 GPM	600 gallons	1,300 sq. ft.	1.0 HP	1/2 HP	230V, 3Ø, 15.0A	5x8x9.16ft.	1250 lb.

*Includes sump pump and peristaltic pump. 230/208/460V 3Ø available on all models as options.

Example of a Custom Biological Combination System

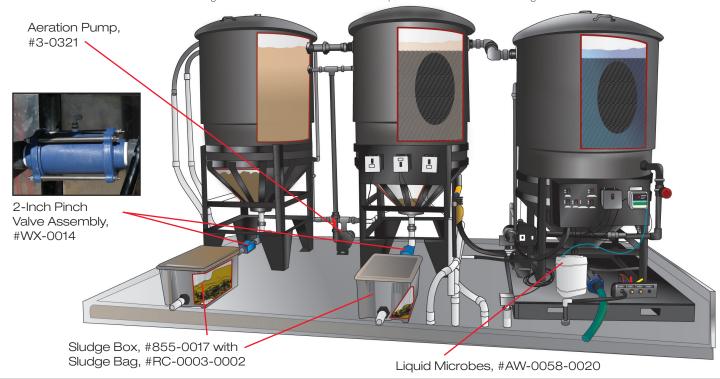
Optional Settling Tank Model #WTA-600-0M11:

Shown with optional tank stand extension legs

Optional Tank Includes Coalescing Aeration Media and Peristaltic Pump Model #WTA-600SA-0M11:

Shown with optional tank stand extension legs

Model #BIO-15-0M10



Biological water treatment systems are customizable for your specific application. Contact your dealer for more information.

ACCESSORIES:

PART NUMBER	DESCRIPTION	FITS MODELS
55-0033	Air fine-bubble injector, 1½-inch – Mazzei used for aeration	BIO-15 models
55-1887	Check valve, 2-inch – Holds prime in suction line	BIO-15 models
855-0017	Sludge box – Plastic box designed to hold the sludge bags; includes a 10-foot x 2-inch diameter PVC hose	BIO-15 models
RC-0003-0002	Biodegradable sludge bags – Designed to capture the sludge while allowing the water to flow through, 5 qty.	BIO-15 models
RC-0016-0001	Replacement media, 600-gallons – Replacement coalescing media	BIO-15 models
RC-0016-0002	Replacement high solids media, 600-gallons – Replacement coalescing media	BIO-15 models

More accessories listed on pages 6-7.

OPTIONS:

PART NUMBER	DESCRIPTION	FITS MODELS
WX-0014	Pinch valve assembly – Pinch valve, bladder style (used on cone bottom tanks), 2-inch, 230V, 1Ø	BIO models
WX-0020	Ozone – For specialized applications where sterilization of the waste stream is desired	BIO-15-0M10
WX-0024	Recirculation option for floats – If used along with the #WX-0042, product tank overflow, water will recirculate from product tank back to pit	BIO-15-0M10
WX-0030	BIO sump pump conversion – Customized option, converts surface-mount sump pump to submersible sump pump, 230V, 1Ø	BIO-15-0M10
WX-0041	165-gallon water tank upgrade – For when a larger volume of usable water is needed	BIO-15 models
WX-0042	Product tank overflow – Allows water to cycle back to collection pit	BIO-15 models
WX-0043	460V, 3Ø – Upgrades 230V model to operate at 460V, 3Ø	BIO-15 models
WX-0044	Ozone – For specialized applications where sterilization of the waste stream is desired	BIO-15 208/230V, 3Ø models
WX-0045	Ozone – For specialized applications where sterilization of the waste stream is desired	BIO-15 460V, 3Ø models
WX-0064	Magnetic drive pump − 230V, 1∅, seal-less	BIO-15-0M10
WX-0065	Magnetic drive pump – 208-230V, 3Ø, seal-less	BIO-15-0M30
WX-0066	Magnetic drive pump – 460V, 3Ø, seal-less	BIO-15-0M30
WX-0101	BIO sump pump conversion – Customized option, converts surface-mount sump pump to submersible sump pump, 230V, 1Ø	BIO-15-0M30
WX-0119	High solids media – Allows for debris to travel easily through media with vertical design	BIO-15 models
WX-0128	Hour meter - Displays the number of hours unit has been in operation	BIO-15 models

More options listed on pages 7-8.

Biological Recycle/Discharge Systems



BENEFITS

- · Low maintenance
- · Low operating costs
- Simple equipment operation

CERTIFICATION

• ETL Certified – US and Canada



Hose connectors are designed for easy accessibility and quick installation



Mazzei® venturi air injection system, 55-0126, sustains beneficial aerobic microbes while preventing bacteria from turning odorous and anaerobic



Pressure manifold set-up is standard on BIO-20R-0M11 and BIO-20R-1M11



Durable "True Union" valve



ETL listed NEMA-4 rated corrosionproof control panel for safe and reliable operation



Slope bottom tanks are standard on all BIO-20, BIO-25 and BIO-35 models



Aeration pump, 3-0397



Transfer pump, 3-0399

Biological Recycle/Discharge Systems



BIO-25R shown with optional waterfall filter, RC-0008-0002, towable grass cart, RC-0004-0002 and peristaltic pump assembly, RC-0021-0001

BIO-20D-1M10 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP - 230V, 10, 15.0A 8x5x4ft. 950 lb. BIO-20D-0M30 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP - 230V, 30, 10.0A 8x5x4ft. 950 lb. BIO-20D-1M30 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP - 230V, 30, 10.0A 8x5x4ft. 950 lb. BIO-20R-0M10 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 10, 25.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-1M10 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 10, 25.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-1M30 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 30, 15.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-1M31 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP	MODEL NUMBER	FLOW RATE	BIOLOGICAL MEDIA	TANK CAPACITY	MATERIAL OF CONSTRUCTION	SUMP PUMP	TRANSFER PUMP	POWER REQUIREMENTS	DIMENSIONS (LxWxH)	SHIP WT.
BIO-20D-0M30 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP — 230V, 30, 10.0A 8x5x4ft. 950 lb. BIO-20D-1M30 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP — 230V, 30, 10.0A 8x5x4ft. 950 lb. BIO-20R-0M10 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 10, 25.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-0M30 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 10, 25.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-0M30 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 30, 15.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-0M31 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 30, 15.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-M011 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP	BIO-20D-0M10	0-20 GPM	2,304 sq. ft.	890 gallons	Marine aluminum	1/2 HP	-	230V, 1Ø, 15.0A	8x5x4ft.	950 lb.
Bio-20D-1M30 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP - 230V, 30, 10.0A 8x5x4ft. 950 lb. Bio-20R-0M10 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 10, 25.0A 8x5x4ft. with 3x3ft. skid 1092 lb. Bio-20R-0M30 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 10, 25.0A 8x5x4ft. with 3x3ft. skid 1092 lb. Bio-20R-0M30 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 30, 15.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BiO-20R-0M31 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 30, 15.0A 8x6x4ft. with 3x3ft. skid 1092 lb. BiO-20R-0M31 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 10, 25.0A 8x6x4ft. 1092 lb. BiO-20R-0M31 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP	BIO-20D-1M10	0-20 GPM	2,304 sq. ft.	890 gallons	Stainless-steel	1/2 HP	_	230V, 1Ø, 15.0A	8x5x4ft.	950 lb.
BIO-20R-0M10 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 10, 25.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-1M10 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 10, 25.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-0M30 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 30, 15.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-1M30 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 30, 15.0A 8x6x4ft. with 3x3ft. skid 1092 lb. BIO-20R-0M11 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 10, 25.0A 8x6x4ft. with 3x3ft. skid 1092 lb. BIO-20R-1M31 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 10, 25.0A 8x6x4ft. 1092 lb. BIO-29R-1M31 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel<	BIO-20D-0M30	0-20 GPM	2,304 sq. ft.	890 gallons	Marine aluminum	1/2 HP	_	230V, 3Ø, 10.0A	8x5x4ft.	950 lb.
BIO-20R-1M10 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 10, 25.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-0M30 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 30, 15.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-1M30 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 30, 15.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-1M31 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 10, 25.0A 8x6x4ft. with 3x3ft. skid 1092 lb. BIO-20R-1M31 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 10, 25.0A 8x6x4ft. with 3x3ft. skid 1092 lb. BIO-20R-1M31 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 10, 25.0A 8x6x4ft. with 3x3ft. skid 1092 lb. BIO-25R-0M10 0-25 GPM 3,456 sq. ft. 1,434 gallons <	BIO-20D-1M30	0-20 GPM	2,304 sq. ft.	890 gallons	Stainless-steel	1/2 HP	_	230V, 3Ø, 10.0A	8x5x4ft.	950 lb.
BIO-20R-0M30 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 30, 15.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-1M30 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 30, 15.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-0M11 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 10, 25.0A 8x6x4ft. 1092 lb. BIO-20R-1M11 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 10, 25.0A 8x6x4ft. 1092 lb. BIO-20R-1M31 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 30, 15.0A 8x6x4ft. 1092 lb. BIO-20R-1M31 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 30, 15.0A 8x6x4ft. 1092 lb. BIO-25R-0M10 0-25 GPM 3,456 sq. ft. 1,434 gallons Marine aluminum 1/2 HP 2.0 HP </th <td>BIO-20R-0M10</td> <td>0-20 GPM</td> <td>2,304 sq. ft.</td> <td>890 gallons</td> <td>Marine aluminum</td> <td>1/2 HP</td> <td>1.5 HP</td> <td>230V, 1Ø, 25.0A</td> <td>8x5x4ft. with 3x3ft. skid</td> <td>1092 lb.</td>	BIO-20R-0M10	0-20 GPM	2,304 sq. ft.	890 gallons	Marine aluminum	1/2 HP	1.5 HP	230V, 1Ø, 25.0A	8x5x4ft. with 3x3ft. skid	1092 lb.
BIO-20R-1M30 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 3Ø, 15.0A 8x5x4ft. with 3x3ft. skid 1092 lb. BIO-20R-0M11 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 1Ø, 25.0A 8x6x4ft. 1092 lb. BIO-20R-1M11 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 1Ø, 25.0A 8x6x4ft. 1092 lb. BIO-20R-0M31 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 3Ø, 15.0A 8x6x4ft. 1092 lb. BIO-20R-1M31 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 3Ø, 15.0A 8x6x4ft. 1092 lb. BIO-25R-0M10 0-25 GPM 3,456 sq. ft. 1,434 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 1Ø, 25.0A 12x6x4ft. 1680 lb. BIO-25R-0M30 0-25 GPM 3,456 sq. ft. 1,434 gallons Stainless-steel 1/2 HP 2.0 HP <t< th=""><td>BIO-20R-1M10</td><td>0-20 GPM</td><td>2,304 sq. ft.</td><td>890 gallons</td><td>Stainless-steel</td><td>1/2 HP</td><td>1.5 HP</td><td>230V, 1Ø, 25.0A</td><td>8x5x4ft. with 3x3ft. skid</td><td>1092 lb.</td></t<>	BIO-20R-1M10	0-20 GPM	2,304 sq. ft.	890 gallons	Stainless-steel	1/2 HP	1.5 HP	230V, 1Ø, 25.0A	8x5x4ft. with 3x3ft. skid	1092 lb.
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BIO-20R-1M11 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 10, 25.0A 8x6x4ft. 1092 lb. BIO-20R-0M31 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 30, 15.0A 8x6x4ft. 1092 lb. BIO-20R-1M31 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 30, 15.0A 8x6x4ft. 1092 lb. BIO-25R-0M10 0-25 GPM 3,456 sq. ft. 1,434 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 10, 25.0A 12x6x4ft. 1680 lb. BIO-25R-0M30 0-25 GPM 3,456 sq. ft. 1,434 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 10, 25.0A 12x6x4ft. 1680 lb. BIO-25R-0M30 0-25 GPM 3,456 sq. ft. 1,434 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 30, 15.0A 12x6x4ft. 1680 lb. BIO-35R-0M30 0-25 GPM 3,456 sq. ft. 1,434 gallons Stainless-steel 1/2 HP 2.0 HP 230V, 30,	BIO-20R-1M30	0-20 GPM	2,304 sq. ft.	890 gallons	Stainless-steel	1/2 HP	1.5 HP	230V, 3Ø, 15.0A	8x5x4ft. with 3x3ft. skid	1092 lb.
BIO-20R-0M31 0-20 GPM 2,304 sq. ft. 890 gallons Marine aluminum 1/2 HP 1.5 HP 230V, 3Ø, 15.0A 8x6x4ft. 1092 lb. BIO-20R-1M31 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 3Ø, 15.0A 8x6x4ft. 1092 lb. BIO-25R-0M10 0-25 GPM 3,456 sq. ft. 1,434 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 1Ø, 25.0A 12x6x4ft. 1680 lb. BIO-25R-0M30 0-25 GPM 3,456 sq. ft. 1,434 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 1Ø, 25.0A 12x6x4ft. 1680 lb. BIO-25R-0M30 0-25 GPM 3,456 sq. ft. 1,434 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 3Ø, 15.0A 12x6x4ft. 1680 lb. BIO-25R-1M30 0-25 GPM 3,456 sq. ft. 1,434 gallons Stainless-steel 1/2 HP 2.0 HP 230V, 3Ø, 15.0A 12x6x4ft. 1680 lb. BIO-35R-0M10 0-35 GPM 6,480 sq. ft. 2,244 gallons Marine aluminum 1/2 HP 2.0 HP 230V,	BIO-20R-0M11	0-20 GPM	2,304 sq. ft.	890 gallons	Marine aluminum	1/2 HP	1.5 HP	230V, 1Ø, 25.0A	8x6x4ft.	1092 lb.
BIO-20R-1M31 0-20 GPM 2,304 sq. ft. 890 gallons Stainless-steel 1/2 HP 1.5 HP 230V, 3Ø, 15.0A 8x6x4ft. 1092 lb. BIO-25R-0M10 0-25 GPM 3,456 sq. ft. 1,434 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 1Ø, 25.0A 12x6x4ft. 1680 lb. BIO-25R-1M10 0-25 GPM 3,456 sq. ft. 1,434 gallons Stainless-steel 1/2 HP 2.0 HP 230V, 1Ø, 25.0A 12x6x4ft. 1680 lb. BIO-25R-0M30 0-25 GPM 3,456 sq. ft. 1,434 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 3Ø, 15.0A 12x6x4ft. 1680 lb. BIO-25R-1M30 0-25 GPM 3,456 sq. ft. 1,434 gallons Stainless-steel 1/2 HP 2.0 HP 230V, 3Ø, 15.0A 12x6x4ft. 1680 lb. BIO-35R-0M10 0-35 GPM 6,480 sq. ft. 2,244 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 1Ø, 25.0A 12x7x5ft. 1900 lb. BIO-35R-0M30 0-35 GPM 6,480 sq. ft. 2,244 gallons Stainless-steel 1/2 HP 2.0 HP 230	BIO-20R-1M11	0-20 GPM	2,304 sq. ft.	890 gallons	Stainless-steel	1/2 HP	1.5 HP	230V, 1Ø, 25.0A	8x6x4ft.	1092 lb.
BIO-25R-0M10 0-25 GPM 3,456 sq. ft. 1,434 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 10, 25.0A 12x6x4ft. 1680 lb. BIO-25R-1M10 0-25 GPM 3,456 sq. ft. 1,434 gallons Stainless-steel 1/2 HP 2.0 HP 230V, 10, 25.0A 12x6x4ft. 1680 lb. BIO-25R-0M30 0-25 GPM 3,456 sq. ft. 1,434 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 30, 15.0A 12x6x4ft. 1680 lb. BIO-25R-1M30 0-25 GPM 3,456 sq. ft. 1,434 gallons Stainless-steel 1/2 HP 2.0 HP 230V, 30, 15.0A 12x6x4ft. 1680 lb. BIO-35R-0M10 0-35 GPM 6,480 sq. ft. 2,244 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 10, 25.0A 12x7x5ft. 1900 lb. BIO-35R-0M30 0-35 GPM 6,480 sq. ft. 2,244 gallons Stainless-steel 1/2 HP 2.0 HP 230V, 10, 25.0A 12x7x5ft. 1900 lb. BIO-35R-0M30 0-35 GPM 6,480 sq. ft. 2,244 gallons Marine aluminum 1/2 HP 2.0 HP	BIO-20R-0M31	0-20 GPM	2,304 sq. ft.	890 gallons	Marine aluminum	1/2 HP	1.5 HP	230V, 3Ø, 15.0A	8x6x4ft.	1092 lb.
BIO-25R-1M10 0-25 GPM 3,456 sq. ft. 1,434 gallons Stainless-steel 1/2 HP 2.0 HP 230V, 10, 25.0A 12x6x4ft. 1680 lb. BIO-25R-0M30 0-25 GPM 3,456 sq. ft. 1,434 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 30, 15.0A 12x6x4ft. 1680 lb. BIO-25R-1M30 0-25 GPM 3,456 sq. ft. 1,434 gallons Stainless-steel 1/2 HP 2.0 HP 230V, 30, 15.0A 12x6x4ft. 1680 lb. BIO-35R-0M10 0-35 GPM 6,480 sq. ft. 2,244 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 10, 25.0A 12x7x5ft. 1900 lb. BIO-35R-0M30 0-35 GPM 6,480 sq. ft. 2,244 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 10, 25.0A 12x7x5ft. 1900 lb. BIO-35R-0M30 0-35 GPM 6,480 sq. ft. 2,244 gallons Marine aluminum 1/2 HP 2.0 HP 230V, 30, 15.0A 12x7x5ft. 1900 lb.	BIO-20R-1M31	0-20 GPM	2,304 sq. ft.	890 gallons	Stainless-steel	1/2 HP	1.5 HP	230V, 3Ø, 15.0A	8x6x4ft.	1092 lb.
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• • • • • • • • • • • • • • • • • • •	BIO-35R-1M10	0-35 GPM	6,480 sq. ft.	2,244 gallons	Stainless-steel	1/2 HP	2.0 HP	230V, 1Ø, 25.0A	12x7x5ft.	1900 lb.
BIO-35R-1M30	BIO-35R-0M30	0-35 GPM	6,480 sq. ft.	2,244 gallons	Marine aluminum	1/2 HP	2.0 HP	230V, 3Ø, 15.0A	12x7x5ft.	1900 lb.
	BIO-35R-1M30	0-35 GPM	6,480 sq. ft.	2,244 gallons	Stainless-steel	1/2 HP	2.0 HP	230V, 3Ø, 15.0A	12x7x5ft.	1900 lb.

D = Discharge / R = Recycle

230V/208V/460V 3Ø available on all models as options.

Accessories





Submersible sump pump, 3-0216





Towable grass cart, RC-0004-0002



Aluminum round sump pit, 56-0069 and aluminum sump grating, 56-0070



Peristaltic pump assembly, RC-0021-0001

ACCESSORIES:

PART NUMBER	DESCRIPTION	FITS MODELS
21-0152	Tank-mount bracket – Used to mount #RC-0008-0002, waterfall filter, to BIO-tank, stainless-steel, for stainless-steel tanks	BIO-20, BIO-25 & BIO-35 models
21-0153	Wall-mount bracket – Used to mount #RC-0008-0002, waterfall filter, to wall	BIO-20, BIO-25 & BIO-35 models
21-0213	Tank-mount bracket – Used to mount #RC-0008-0002, waterfall filter, to BIO-tank, stainless-steel, for aluminum tanks	BIO-20, BIO-25 & BIO-35 models
3-0216	Submersible sump pump – Stainless-steel replacement, 1/2 HP, 230V, 1Ø, 5.0A	BIO-20, BIO-25 & BIO-35 models
3-0397	Aeration pump − 1.5 HP, 115V/230V, 1∅	BIO-25 & BIO-35 models
3-0398	Aeration pump – 1.5 HP, 208-230V/460V, 3Ø	BIO-25 & BIO-35 models
3-0399	Transfer pump – 2.0 HP, 115V/230V, 1Ø	BIO-25 & BIO-35 models
3-0400	Transfer pump – 2.0 HP, 208-230V/460V, 3Ø	BIO-25 & BIO-35 models
3-0401	Transfer pump – 1.5 HP, 115V/230V, 1Ø	All BIO models
3-0402	Transfer pump – 1.5 HP, 208-230V/460V, 3Ø	All BIO models
3-0460	Replacement sump pump – Surface-mount, 1.0 HP, 230V, 8.0A	All BIO models
32-0918	Buck booster – Adjusts voltage on equipment, mounted on unit	All BIO models
33-0661	Trap and basket – Used on #3-0460, replacement sump pump	All BIO models
5-0200A18	Cone bottom tank bracket, 300-gallons – Powder coated bracket to mount #RC-0008-0002, waterfall filter	Consult factory
55-0068	Mazzei injector, 2-inch – Used for aeration	BIO-20, BIO-25 & BIO-35 models
55-0126	Mazzei venturi air injection system, 2-inch	All BIO models
56-0069	Aluminum round sump pit – Lightweight aluminum design; 4-inch NPT inlet; 2-inch x 2-inch NPT and 1-inch x ¾-inch NPT outlets; 52-gallon capacity	Consult dealer
56-0070	Aluminum sump grating – Lightweight aluminum cover for #56-0069, aluminum round sump pit	Consult dealer
855-0062	Replacement peristaltic metering pump – For replacement of an existing pump in the field; includes wall mount plug	All BIO models
RC-0004-0001	Grass cart – Grass from #RC-0008-0002, waterfall filter, is collected and de-watered and can be easily transported for disposal	All BIO models
RC-0004-0002	Towable grass cart – Grass from #RC-0008-0002, waterfall filter, is collected and de-watered and can be easily transported for disposal	All BIO models
RC-0008-0002	Waterfall filter – Water flows from the system while grass and debris are separated and dropped into the grass cart, marine aluminum	All BIO models
RC-0009-0001	Single filter housing – Holds any 20-inch filter	All BIO models
RC-0009-0002	Double filter housing – Holds any combination of 2 – 20-inch filters	All BIO models
RC-0009-0003	Triple filter housing – Holds any combination of 3 – 20-inch filters	All BIO models
RC-0021-0001	Peristaltic pump assembly – Single metering pump wired into BIO unit, control box for automatic liquid microbe injection	All BIO models
RC-0021-0002	Dual peristaltic pump assembly – Two metering pumps in one set-up for dual liquid injection	All BIO models
RC-0021-0120	Plug-in single peristaltic pump assembly – Single metering pump with 120V plug and 54-inch power cord for liquid microbe injection. Ideal for injections into pits and tank. Requires outlet.	All BIO models

Accessories & Options

WATERFALL FILTER, RC-0008-0002

DESIGNED TO SEPARATE GRASS CLIPPINGS, LEAVES AND OTHER VEGETATION FROM WASTEWATER.

APPLICATIONS

- Golf courses
- · Equipment wash pads
- Municipalities
- · Rental yards

The grass clippings and water are pumped from wash catch pits to the waterfall filter. The filter is equipped with a wedge wire screen that separates the grass and debris and drops it into a grass cart below while the filtered water is directed to the biological water treatment system for further treatment.



PART NUMBER	MATERIAL OF CONSTRUCITON	WIRE SCREEN	DIMENSIONS (LxWxH)	SHIP WT.
RC-0008-0002	Marine aluminum	304L stainless-steel, rated to 40-45 mesh	36x20.5x25in.	100 lb.

ph control system

WX-0037 230V WX-0102 120V

A desired pH set point is selected by the user and a pH adjustment chemical is metered into the wastewater by a peristaltic pump.

The pH set point is achieved by either lowering or raising the pH level.

DUAL CONTROL pH CONTROL SYSTEM

WX-0134 230V WX-0135 120V

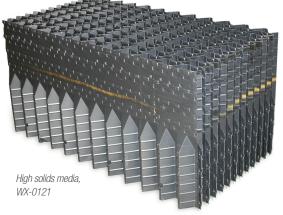
The dual control pH control system has two set points where pH can be adjusted either up or down.



Options









Epoxy-lined tank, WX-0124

OPTIONS:

PART NUMBER	DESCRIPTION	FITS MODELS
WX-0005	Ozone – For specialized applications where sterilization of the waste stream is desired	BIO-25R-0M10
WX-0014	Pinch valve assembly - Pinch valve, bladder style (used on cone bottom tanks), 2-inch, 230V, 10	All BIO models
WX-0015	Ozone – For specialized applications where sterilization of the waste stream is desired	BIO-35R-1M10
WX-0029	550-gallon product tank expansion – For when larger volume of usable water is needed	All BIO models
WX-0037	pH control system, 230V – For when pH adjustment is needed	All BIO models
WX-0039	Pinch valve assembly – Pinch valve, bladder style (used on cone bottom tanks), 2-inch, 120V, 10	All BIO models
WX-0040	Ozone – For specialized applications where sterilization of the waste stream is desired	BIO-20D-1M10
WX-0067	Magnetic drive pump – 230V, 10, seal-less	BIO-20D models
WX-0068	Magnetic drive pump – 208-230V, 3Ø, seal-less	BIO-20D models
WX-0069	Magnetic drive pump – 460V, 3Ø, seal-less	BIO-20D models
WX-0070	Magnetic drive pump – 230V, 10, seal-less	BIO-20R models
WX-0071	Magnetic drive pump – 208-230V, 3Ø, seal-less	BIO-20R models
WX-0072	Magnetic drive pump – 460V, 3Ø, seal-less	BIO-20R models
WX-0073	Magnetic drive pump – 230V, 10, seal-less	BIO-25 & BIO-35 models
WX-0074	Magnetic drive pump – 208-230V, 3Ø, seal-less	BIO-25 & BIO-35 models
WX-0075	Magnetic drive pump – 460V, 3Ø, seal-less	BIO-25 & BIO-35 models
WX-0089	Ozone – For specialized applications where sterilization of the waste stream is desired	BIO-20R-1M10 & BIO-20R-1M11
WX-0100	BIO sump pump conversion – Customized option, converts submersible pump to surface-mount sump pump	BIO-20R, BIO-25R & BIO-35R models
WX-0102	pH control system, 120V – For when pH adjustment is needed	All BIO models
WX-0120	High solids media – Allows for debris to travel easily through media with vertical design	BIO-20 models
WX-0121	High solids media – Allows for debris to travel easily through media with vertical design	BIO-25 models
WX-0122	High solids media – Allows for debris to travel easily through media with vertical design	BIO-35 models
WX-0124	Epoxy-lined tank – High solid polyamide epoxy-lined tank is chemical and corrosion-resistant	BIO-20D aluminum models
WX-0125	Epoxy-lined tank – High solid polyamide epoxy-lined tank is chemical and corrosion-resistant	BIO-20R aluminum models
WX-0126	Epoxy-lined tank – High solid polyamide epoxy-lined tank is chemical and corrosion-resistant	BIO-25R aluminum models
WX-0127	Epoxy-lined tank – High solid polyamide epoxy-lined tank is chemical and corrosion-resistant	BIO-35R aluminum models
WX-0128	Hour meter – Displays the number of hours unit has been in operation	All BIO models
WX-0133	Coagulation system – Used in heavy solids applications to help dirt and solids settle for easy removal	All BIO models
WX-0134	Dual pH control, 230V – Two set points where pH can be adjusted	All BIO models
WX-0135	Dual pH control, 115V – Two set points where pH can be adjusted	All BIO models
WX-0136	Heater, 230V – Promotes heat for microbes, powered from main box, additional 20A required	BIO-20R, BIO-25R & BIO-35R models
WX-0137	Heater, 460V – Promotes heat for microbes, powered from main box, additional 20A required	BIO-20R, BIO-25R & BIO-35R models
WX-0138	Heater, 230V – Promotes heat for microbes, powered from main box, additional 20A required	BIO-20 models without front deck
WX-0139	Heater, 460V – Promotes heat for microbes, powered from main box, additional 20A required	BIO-20 models without front deck
WX-0142	250-gallon auxiliary poly tank – Allows you to treat the BIO water with ozone in a separate poly tank	All BIO models

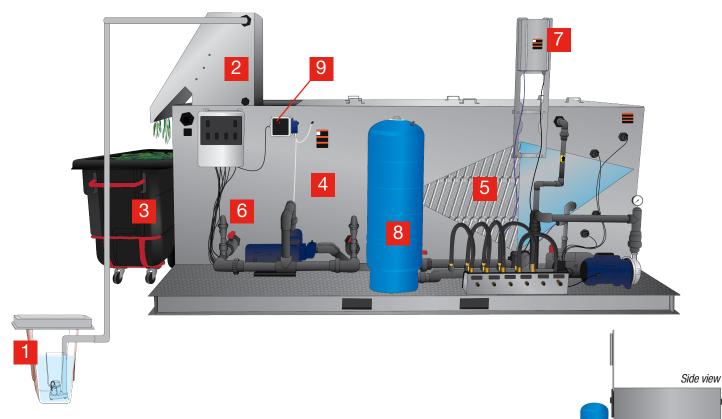
Ozone is not available on Marine Aluminum models unless WX-0142 is included.

System Set-Up and Epoxy-Lined Tanks

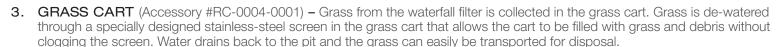




Process & Flow Description



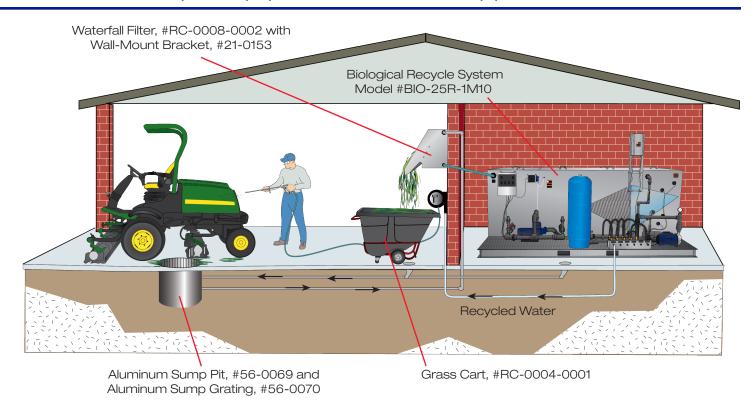
- 1. SUBMERSIBLE SUMP PUMP Untreated wash water is introduced into the BIO system by a 1/2 HP submersible sump pump.
- 2. WATERFALL FILTER (Accessory #RC-0008-0002) Especially useful in golf course applications, water is typically pumped into a marine aluminum waterfall filter for effective grass and particle separation. Water flows into the system while grass and debris are separated and dropped into the grass cart.



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- 4. BIOREACTION TANK Untreated wastewater is pumped in the first chamber of the stainless-steel tank, where solids are precipitated and the microbes begin their work. The tank has up to 2,244 gallons of holding capacity to provide maximum treatment time for the biological microbes.
- 5. BIOFILM GENERATIVE MEDIA The bioreaction portion of the system houses literally thousands of square feet of biological media surface area where the microbe growth is maximized. Water flows through the media and around a series of baffles, changing direction countless times and maximizing contact with "hungry" microbes. The microbes then treat the water by consuming a broad range of organic constituents (such as herbicides, pesticides, oils, grease, etc.) turning them into carbon dioxide and water. To ensure proper and continued colonization, microbes are added periodically a process called inoculation.
- 6. **AERATION SYSTEM** A unique aeration system injects large amounts of oxygen into the wastewater. Generating dissolved oxygen is critical for maximizing the health and activity level of microbes and the size of the colony.
- 7. OZONE (OPTION) An ozone generator is an option for specialized applications where sterilization of the waste stream is desired. (Ozone injection is not available for aluminum tank systems)
- 8. PRESSURIZED TANK Once water is biologically treated, a pressurized tank and pump deliver up to 35.0-GPM of recycled water to three outlet ports.
- 9. PERISTALTIC PUMP (Option) Self-priming for passive automatic liquid microbe injection.
- 10. SLOPED BOTTOM TANKS Makes regular scheduled maintenance easier.

Sample Equipment Wash Pad Application



RECOMMENDED APPLICATIONS:

- Rental Yards
- Golf Courses
- Heavy Equipment Dealers
- Trucking Facilities
- Military Bases
- Truck Rental Fleets
- Diesel Repair Facilities
- Forklift Washing Operations
- Aircraft Maintenance and Restoration
- Shipyards
- Municipalities/State DOTs
- Oil Fields
- Engine Rebuilders and Manufacturers

Before

THE IMPORTANCE OF A PROPER PIT SYSTEM:

Once equipment is washed, the untreated wash water flows into your pit system. A proper pit system for your application is the first step in proper wash water treatment and a critical element in any wash water recycle system.

Consult your dealer to determine the pit system configuration that works best for your application.

THE RIGHT TOUCH

Our stainless-steel tanks go through a passivation process after the welding phase of production. This ensures a quality product with low maintenance.







Fiberglass Pits & Consumables

IN-GROUND FIBERGLASS PIT SYSTEMS

3' x 9' PIT SYSTEMS

PART NUMBER	PIT SIZE (FT.)	DESCRIPTION	SHIP WT.
12-0074	3x9x4.5	3-stage collection pit, fiberglass, 600-gallon capacity	480 lb.
12-0223	3x9x4.5	3-foot x 9-foot baffleless pit, fiberglass, 600-gallon capacity	480 lb.
12-0238	3x9x4.5	2-stage collection pit with single baffle, fiberglass, 600-gallon capacity	480 lb.
12-0244	3x9x4.5	3-stage collection pit with middle weir and third baffle, fiberglass, large solids settling area, 600-gallon capacity	480 lb.
20-1505A18	Fits 3x9	Pit liner assembly, painted; 2 qty. are required	45 lb.
56-0032	Fits 3x9	Aluminum hinged diamond plate cover with 3 frame sections	100 lb.
RC-0001-0003	Fits 3x9	Brace kit for installation of 3-stage collection pit	200 lb.
RC-0018-0001*	Fits 3x9	Steel grating for pit; 3,060 lb./ft. ² uniform load rating	546 lb.
RC-0018-0002*	Fits 3x9	Steel grating for pit with steel cover; 3,060 lb./ft. ² uniform load rating	680 lb.

^{*}May combine RC-0018-0001 and RC-0018-0002 to have both open and closed sections for the 3' x 9' pits.

3' x 3' PIT SYSTEM

PART NUMBER	PIT SIZE (FT.)	DESCRIPTION	SHIP WT.
12-0071	3x3x4.5	Catch basin, fiberglass, 100-gallon capacity	190 lb.
20-0480A18	Fits 3x3	Steel grating for pit, 2 sections; 6,250 lb./ft. 2 uniform load rating, H-20 load rated	250 lb.
20-1533A18	Fits 3x3	Pit liner assembly, painted	26 lb.
56-0031	Fits 3x3	Aluminum diamond plate cover and frame	30 lb.
RC-0001-0002	Fits 3x3	Brace kit for installation of 3-foot x 3-foot pit	150 lb.



PART NUMBER	PIT SIZE (FT.)	DESCRIPTION	SHIP WT.
12-0073	2x2x3	Sump pit, fiberglass, 50-gallon capacity	92 lb.
20-0479A18	Fits 2x2	Steel grating for pit; 6,660 lb./ft.2 uniform load rating, H-20 load rated	100 lb.
56-0030	Fits 2x2	Aluminum diamond plate cover and frame	60 lb.
RC-0001-0001	Fits 2x2	Brace kit for installation of 2-foot x 2-foot pit	75 lb.

Additional product information available in the Pit Systems Brochure.



CONSUMABLES

PART NUMBER	DESCRIPTION	CFU COUNT
AW-0058-0020	Liquid concentrate hydrocarbon bacteria – Use with peristaltic pump, 5-gallons	54 Million CFU/ml
AW-0058-0021	Surface prep liquid microbes – For concrete and parts cleaning, removes hydrocarbons, 5-gallons	67 Million CFU/ml
RC-2014-0002	Hydrocarbon microbes - 2 lb. solid cube, lasts approximately 2-3 months	4 Billion CFU/gm
RC-2017-0001	Hydrocarbon microbes – Tablet, lasts approximately 15-30 days	4 Billion CFU/gm
RC-2001-0001	Hydrocarbons/VOCs mix – Microbes, monthly inoculation	2.27 Trillion CFU/lb.
RC-2002-0001	Golf course mix – Microbes, monthly inoculation	2.27 Trillion CFU/lb.
RC-2003-0001	Fats, oils and greases – Microbes, monthly inoculation	2.27 Trillion CFU/lb.







RC-2002-0001



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