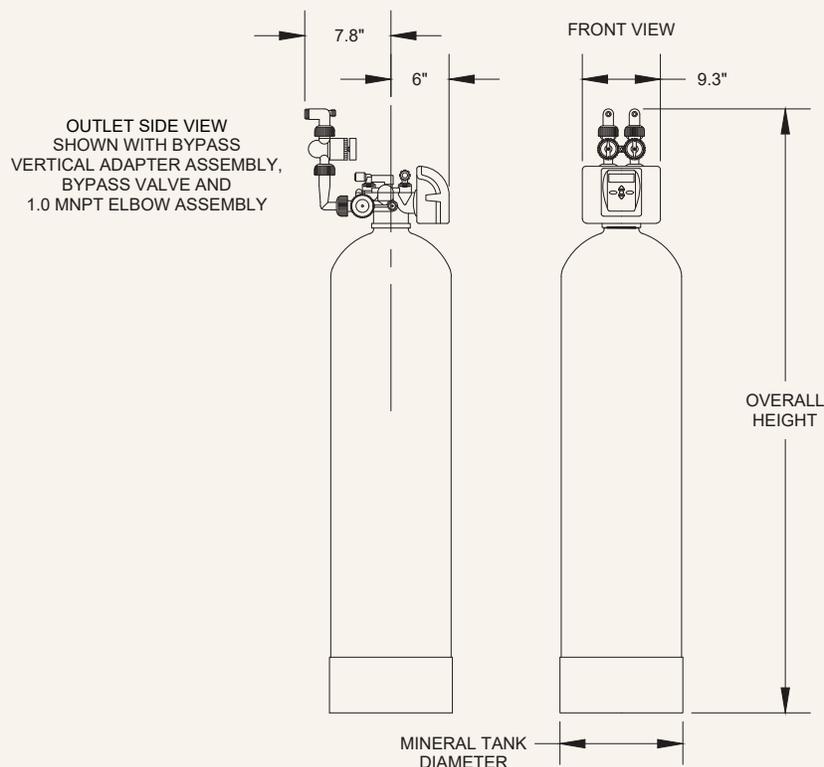




# LANCASTER

## WATER TREATMENT

### X-FACTOR SERIES LXIMAIR AQUANUE FILTERS



LXIMAIR PROGRAM CYCLES*		AQUANUE (BIRM) AERATION FILTER				
Model Number	7-LXIMAIR-1B		7-LXIMAIR-2B		7-LXIMAIR-3B	
Units:	Time	Gallons	Time	Gallons	Time	Gallons
1st Cycle: Air Release	1 sec	0	1 sec	0	1 sec	0
2nd Cycle: Filtering	1 min	0	1 min	0	1 min	0
3rd Cycle: Air Release	1 sec	0	1 sec	0	1 sec	0
4th Cycle: Filtering	1 min	0	1 min	0	1 min	0
5th Cycle: Air Release	1 sec	0	1 sec	0	1 sec	0
6th Cycle: Filtering	1 min	0	1 min	0	1 min	0
7th Cycle: Backwash	10 min	53	10 min	100	10 min	150
8th Cycle: Regenerant Draw Down	13 min	23.4	18 min	32.4	30 min	54
9th Cycle: End	-	-	-	-	-	-
Total Gallons to Drain**	76.4		132.4		204	
Total Regeneration Time	≈ 26 min		≈ 31 min		≈ 43 min	
Days Between Backwash***	1		1		1	

\*Factory Program Settings for models with serial numbers ending with the number 1.

\*\*Based on 50 PSI Inlet Pressure

\*\*\*Factory Program Setting. Days between backwash can be field adjusted based on local conditions. Refer to manual. Backwashing every day is strongly recommended to replace the head of air. Less frequent backwashing should only be considered for application where iron is the only contaminant: 0.3 - 2.0 ppm iron, every 3rd day. 2.0 - 4.0 ppm iron, every other day.



# X-FACTOR SERIES LXIMAIR AQUANUE FILTERS

LXIMAIR SPECIFICATIONS*		AQUANUE (BIRM) AERATION FILTER		
Model Number		7-LXIMAIR-1B	7-LXIMAIR-2B	7-LXIMAIR-3B
Inlet/Outlet Fitting Options (Inches) <sup>1</sup>		0.75 - 1.0 <sup>1</sup> - 1.25 - 1.5	0.75 - 1.0 <sup>1</sup> - 1.25 - 1.5	0.75 - 1.0 <sup>1</sup> - 1.25 - 1.5
Bypass Included		Yes	Yes	Yes
Drain Fitting Elbow NPT (Inches)		3/4 NPT	1" NPT Straight Fitting	1" NPT Straight Fitting
Water Pressure Range (PSI)		20 - 100	20 - 100	20 - 100
Water Operating Temperature Range (°F)		35 - 100	35 - 100	35 - 100
Plug-In Power Adapter Input (VAC - Hz - A)		120V AC - 60Hz - 0.35A	120V AC - 60Hz - 0.35A	120V AC - 60Hz - 0.35A
Plug-In Power Adapter Output (VDC - A)		15V DC - 0.5A	15V DC - 0.5A	15V DC - 0.5A
Plug-In Power Adapter Cord Length (FT)		15 FT	15 FT	15 FT
PC Board Relay Terminal Block DC Output (V)		12V DC	12V DC	12V DC
3 Volt Lithium Coin Cell Battery (Type)		2032	2032	2032
Amount of Birm (Cubic Feet) <sup>2</sup>		1	2	3
Service Flow Rates (GPM) <sup>3</sup>	Continuous	1.9 to 2.7	3.7 to 5.4	4.9 to 7.0
	Intermittent (Peak)	3.5 to 4.6	7.0 to 9.1	9.1 to 11.9
Overall Height (Inches)		66.4	77.73	77.33
Mineral Tank Size: Diameter x Height (Inches)		10 x 54	14 x 65	16 x 65
Bottom Distributor Type		Plate	Plate	Plate
Top Basket Distributor		No	No	No
Air Blocker		Yes	Yes	Yes
Underbed Layer		No	No	No
Drain Line Flow Control (GPM)		5.3	10	15
Injector (Color)		1K - Light Green	1K - Light Green	1K - Light Green
Water to Drain (Gallons)		76	132	204

\*Specifications for models with serial numbers ending with the number 1.

<sup>1</sup>1.0 MNPT Elbow Standard - Options Available

<sup>2</sup>Mineral used: Birm is a granular filter media commonly used for the reduction of iron and/or manganese from water supplies. Birm does not require chemicals for regeneration, only periodic backwashing is required. The mineral bed should be backwashed frequently to eliminate accumulated suspended matter and re-grade the bed.

#### Influent Limitations and Operating Parameters:

Chlorinated water NOT recommended.

Free chlorine concentration less than 0.5 ppm.

Ozone injection NOT recommended.

No Hydrogen Sulfide present! - Hydrogen Sulfide should be removed prior to contact with Birm media.

Oil: None Present.

Polyphosphates: None present.

Organic Matter: Less than 5 ppm TOC.

When using Birm for iron removal, the Dissolved Oxygen (D.O.) content must be equal to at least 15% of the iron content with a pH of 6.8 or more. If the influent water has a pH of less than 6.8, neutralizing additives such as Calcite, Supermix (80% Calcite/20% Corosex) or Soda Ash may be used prior to the Birm Filter to raise the pH. Birm may also be used for manganese reduction with the same dependability as iron removal.

For manganese reduction applications the water to be treated should have a pH of 8.0-9.0 for best results. If the water also contains iron, the pH should be below 8.5. High pH conditions may cause the formulation of colloidal iron which is very difficult to filter out. All other conditions remain the same for either manganese or iron removal.

**Elevated treated water manganese concentrations before regeneration may mean that the filter media is being destroyed or bed reduction capacity has been exceeded. Take corrective actions as necessary. Chlorination greatly reduces Birm's activity. High concentrations of chlorine compounds may deplete the catalytic coating. If chlorine and hydrogen sulfide are not present, low pH or lack of oxygen are the most likely conditions leading to media destruction. Polyphosphates are known to coat Birm and reduce Birm's ability to remove iron or manganese. Before adding any chemical to the influent or backwash water, the chemical's compatibility with Birm should be thoroughly tested.**

Well pump capacity must be equal to or greater than the required backwash flow rate to assure proper backwash. If the well pump cannot provide the required backwash flow rate, consider two smaller filters, parallel installation with offset backwash times.

#### <sup>3</sup>Basis for Service Flow Rates:

Continuous - 3.5 to 5.0 GPM/SQ. FT.

Intermittent (Peak) - 6.5 to 8.5 GPM/SQ. FT.

Higher flow rates are possible, however lower flow rates produce higher quality water.