



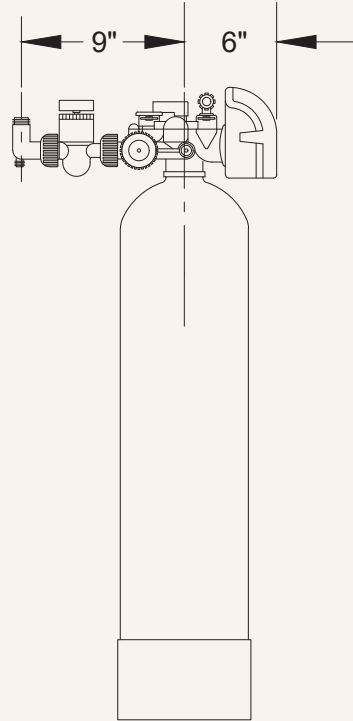
# LANCASTER

## WATER TREATMENT

DIAMOND LINE LXIM - IRON FILTERS

### X-FACTOR SERIES LXIM IRON FILTERS

OUTLET SIDE VIEW  
SHOWN WITH BYPASS  
AND 1.0 MNPT ELBOW  
ASSEMBLY



FRONT VIEW



LXIM PROGRAM CYCLES*	IRON (BIRM) FILTER					
	7-LXIM-1B		7-LXIM-2B		7-LXIM-3B	
Model Number	Minutes	Gallons	Minutes	Gallons	Minutes	Gallons
Units:						
1st Cycle: Backwash	10	53	10	100	10	100
2nd Cycle: Rinse	5	26.5	5	50	5	50
3rd Cycle: End	-	-	-	-	-	-
Total Gallons to Drain	79.5		150		150	
Total Minutes	15		15		15	
Days Between Backwash**	7		7		7	

\*Factory Program Settings. To adjust cycle programming, consult factory.

\*\*Factory Program Setting. Days between backwash can be field adjusted based on local conditions. Refer to manual.

# X-FACTOR SERIES LXIM IRON FILTERS

LXIM SPECIFICATIONS		IRON (BIRM) FILTER		
Model Number		7-LXIM-1B	7-LXIM-2B	7-LXIM-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	3/4 NPT	3/4 NPT
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	3.2 to 4.6	3.7 to 5.4
	Intermittent (Peak)	3.5 to 4.6	6.0 to 7.8	7.0 to 9.1
Overall Height (Inches)		51.3	55.3	72.73
Mineral Tank Size: Diameter x Height (Inches)		10 x 44	13 x 48	14 x 65
Bottom Distributor Type		Plate	Plate	Plate
Top Basket Distributor		No	No	No
Underbed Layer		No	No	No
Drain Line Flow Control (GPM)		5.3	10	10
Water to Drain (Gallons)		79.5	150	150

<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 periodically 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.

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. A water having a low D.O. level may be pretreated by aeration (see AquaNue models). 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.

<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.