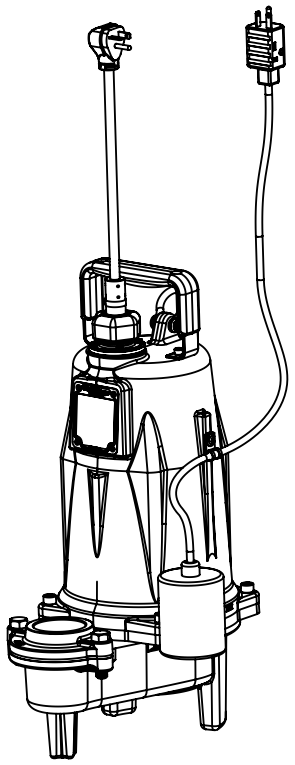
Liberty Pumps®

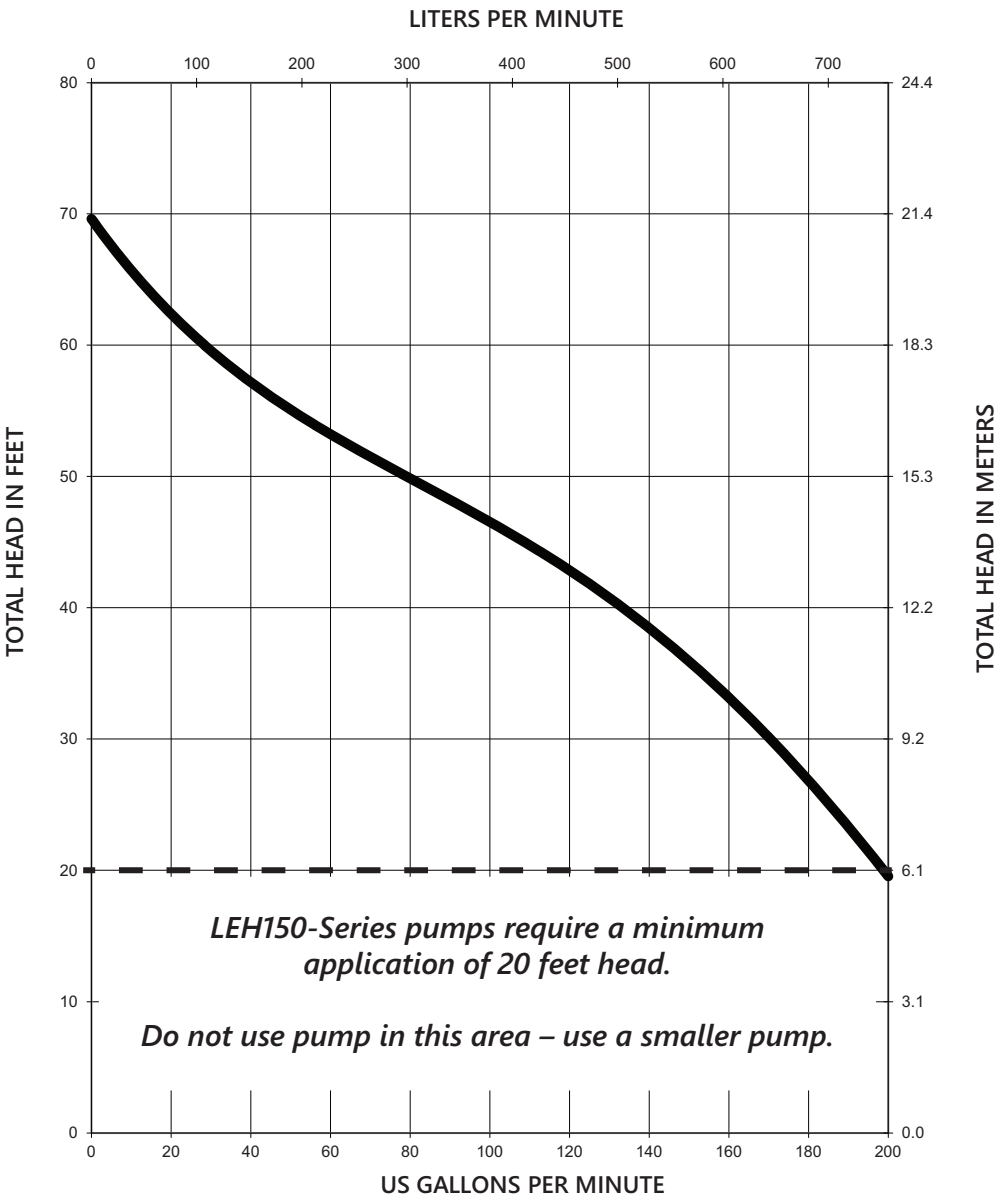
A Family and Employee Owned Company

Pump **Specification**

LEH150-Series

1.5 hp High Head 2" Solids Handling Sewage Pumps





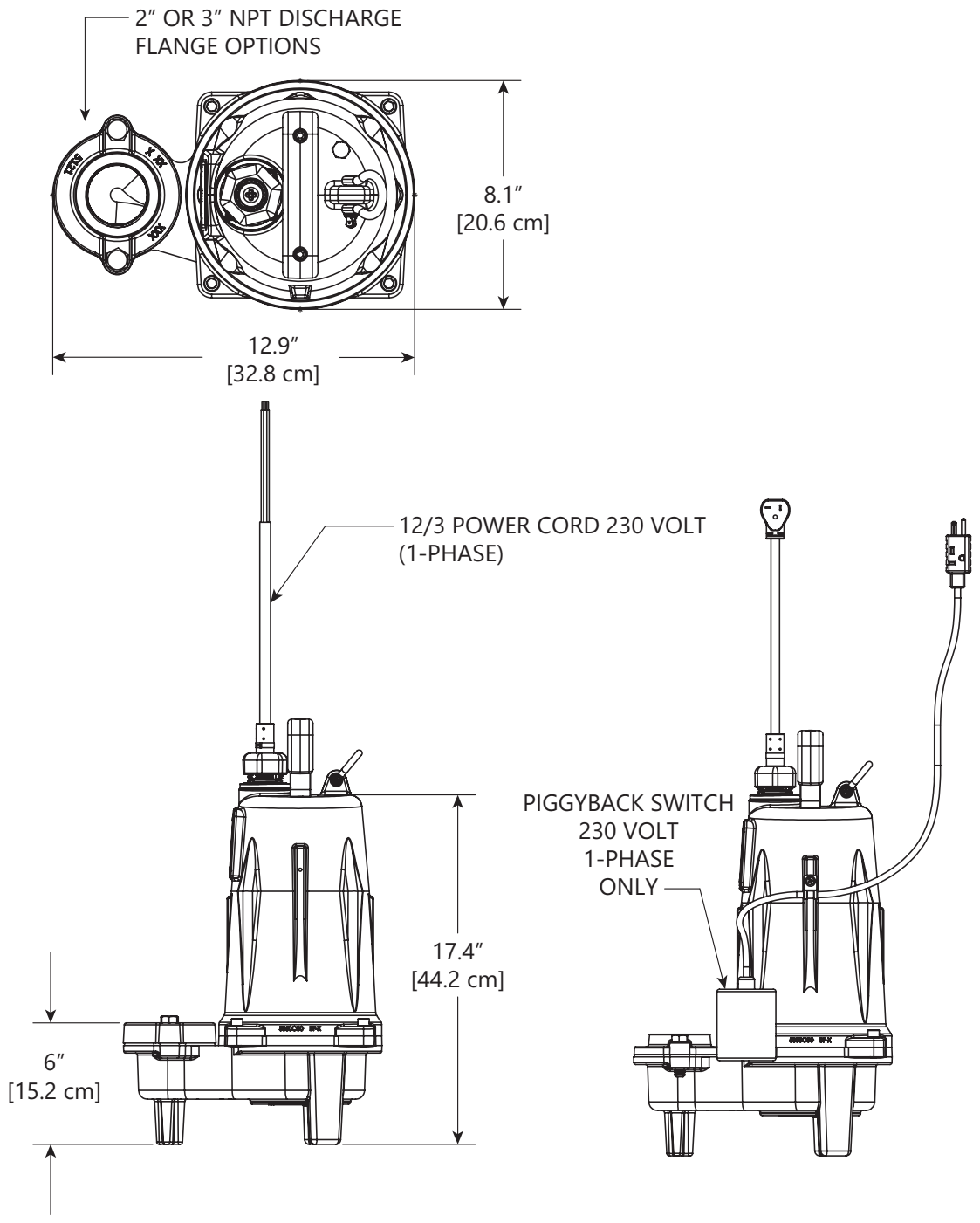
ATTENTION

For pressure sewer applications, verify a ***Redundant Check Valve Assembly*** (curb stop and check valve) is installed between the pump discharge and the street main, as close to the public right-of-way as possible, on all installations to protect from system pressures.

Copyright © Liberty Pumps, Inc. 2026 All rights reserved. Specifications subject to change without notice.

7000 Apple Tree Avenue Bergen NY 14416 ■ ***Phone*** *1-800-543-2550* ■ ***Fax*** *1-585-494-1839* ■ ***Email*** *Liberty@LibertyPumps.com* ■ ***Web*** *www.LibertyPumps.com*

LEH150-Series Dimensional Data



Copyright © Liberty Pumps, Inc. 2026 All rights reserved. Specifications subject to change without notice.

7000 Apple Tree Avenue Bergen NY 14416 ■ ***Phone*** *1-800-543-2550* ■ ***Fax*** *1-585-494-1839* ■ ***Email*** *Liberty@LibertyPumps.com* ■ ***Web*** *www.LibertyPumps.com*

LEH150-Series Electrical Data

MODEL	HP	VOLTAGE	PHASE	SF	FULL LOAD AMPS	LOCKED ROTOR AMPS	THERMAL OVERLOAD TEMP	STATOR WINDING CLASS	CORD LENGTH	DISCHARGE	AUTOMATIC
LEH152A2-2	1.5	208–230	1	1.00	15	53	135°C	B	25′	2″ FLANGED	YES
LEH152A2-5-Y	1.5	208–230	1	1.00	15	53	135°C	B	50′	2″ FLANGED	YES
LEH152M2-2	1.5	208–230	1	1.00	15	53	135°C	B	25′	2″ FLANGED	NO
LEH152M2-3	1.5	208–230	1	1.00	15	53	135°C	B	35′	2″ FLANGED	NO
LEH152M2-5	1.5	208–230	1	1.00	15	53	135°C	B	50′	2″ FLANGED	NO
LEH152A3-2	1.5	208–230	1	1.00	15	53	135°C	B	25′	3″ FLANGED	YES
LEH152A3-5-Y	1.5	208–230	1	1.00	15	53	135°C	B	50′	3″ FLANGED	YES
LEH152M3-2	1.5	208–230	1	1.00	15	53	135°C	B	25′	3″ FLANGED	NO
LEH152M3-3	1.5	208–230	1	1.00	15	53	135°C	B	35′	3″ FLANGED	NO
LEH152M3-5	1.5	208–230	1	1.00	15	53	135°C	B	50′	3″ FLANGED	NO
LEH153M2-2	1.5	208/230	3	1.00	11.4	61	N/A	B	25′	2″ FLANGED	NO
LEH153M2-3	1.5	208/230	3	1.00	11.4	61	N/A	B	35′	2″ FLANGED	NO
LEH153M2-5	1.5	208/230	3	1.00	11.4	61	N/A	B	50′	2″ FLANGED	NO
LEH153M3-2	1.5	208/230	3	1.00	11.4	61	N/A	B	25′	3″ FLANGED	NO
LEH153M3-3	1.5	208/230	3	1.00	11.4	61	N/A	B	35′	3″ FLANGED	NO
LEH153M3-5	1.5	208/230	3	1.00	11.4	61	N/A	B	50′	3″ FLANGED	NO
LEH154M2-2	1.5	440–480	3	1.00	5.7	31	N/A	B	25′	2″ FLANGED	NO
LEH154M2-3	1.5	440–480	3	1.00	5.7	31	N/A	B	35′	2″ FLANGED	NO
LEH154M2-5	1.5	440–480	3	1.00	5.7	31	N/A	B	50′	2″ FLANGED	NO
LEH154M3-2	1.5	440–480	3	1.00	5.7	31	N/A	B	25′	3″ FLANGED	NO
LEH154M3-3	1.5	440–480	3	1.00	5.7	31	N/A	B	35′	3″ FLANGED	NO

Copyright © Liberty Pumps, Inc. 2026 All rights reserved. Specifications subject to change without notice.

*7000 Apple Tree Avenue Bergen NY 14416 ■ **Phone** 1-800-543-2550 ■ **Fax** 1-585-494-1839 ■ **Email** Liberty@LibertyPumps.com ■ **Web** www.LibertyPumps.com*

MODEL	HP	VOLTAGE	PHASE	SF	FULL LOAD AMPS	LOCKED ROTOR AMPS	THERMAL OVERLOAD TEMP	STATOR WINDING CLASS	CORD LENGTH	DISCHARGE	AUTOMATIC
LEH154M3-5	1.5	440–480	3	1.00	5.7	31	N/A	B	50′	3″ FLANGED	NO
LEH155M2-2	1.5	575	3	1.00	4.8	24	N/A	B	25′	2″ FLANGED	NO
LEH155M2-3	1.5	575	3	1.00	4.8	24	N/A	B	35′	2″ FLANGED	NO
LEH155M2-5	1.5	575	3	1.00	4.8	24	N/A	B	50′	2″ FLANGED	NO
LEH155M3-2	1.5	575	3	1.00	4.8	24	N/A	B	25′	3″ FLANGED	NO
LEH155M3-3	1.5	575	3	1.00	4.8	24	N/A	B	35′	3″ FLANGED	NO
LEH155M3-5	1.5	575	3	1.00	4.8	24	N/A	B	50′	3″ FLANGED	NO

LEH150-Series Control Panel Information

PUMP MODEL	SX-SERIES 3-FLOAT NEMA 1	SX-SERIES 3-FLOAT NEMA 4X	AE-SERIES 3-FLOAT NEMA 1	AE-SERIES 4-FLOAT NEMA 1	AE-SERIES 3-FLOAT NEMA 4X	AE-SERIES 4-FLOAT NEMA 4X	IPS-SERIES	IPD-SERIES
	SIMPLEX		DUPLEX				SIMPLEX	DUPLEX
LEH152	SXH21=3	SXH24=3	AE21H=3	AE21H=4	AE24H=3	AE24H=4	IPS-24H	IPD-24H
LEH153	—	SX34=3-511	—	—	AE34=3-511	AE34=4-511	IPS-34-511	IPD-34-511
LEH154	—	SX34=3-171	—	—	AE34=3-171	AE34=4-171	IPS-34-171	IPD-34-171
LEH155	—	SX54=3-161	—	—	AE54=3-161	AE54=4-161	IPS-54-161	IPD-54-161

Copyright © Liberty Pumps, Inc. 2026 All rights reserved. Specifications subject to change without notice.

*7000 Apple Tree Avenue Bergen NY 14416 ■ **Phone** 1-800-543-2550 ■ **Fax** 1-585-494-1839 ■ **Email** Liberty@LibertyPumps.com ■ **Web** www.LibertyPumps.com*

LEH150-Series Technical Data

IMPELLER	SEMI-OPEN 2 VANE, CLASS 25 CAST IRON
SOLIDS HANDLING	2″
PAINT	POWDER COATING
MAX LIQUID TEMP	
CONTINUOUS DUTY	40°C / 104°F
INTERMITTENT	60°C / 140°F
MAX STATOR TEMP	135°C / 275°F
THERMAL OVERLOAD (1-PHASE)	135°C / 275°F
POWER CORD TYPE	
1-PHASE	SJOOW
3-PHASE	SEOOW
MOTOR HOUSING	CLASS 25 CAST IRON
VOLUTE	CLASS 25 CAST IRON
SHAFT	STAINLESS
HARDWARE	STAINLESS
O-RINGS	BUNA-N
MECHANICAL SEAL	UNITIZED GRAPHITE IMPREGNATED SILICON CARBIDE
MIN BEARING LIFE	50,000 HRS
APPROX WEIGHT	93 LBS / 42 KG
CERTIFICATIONS	SSPMA, cCSAus

Copyright © Liberty Pumps, Inc. 2026 All rights reserved. Specifications subject to change without notice.

*7000 Apple Tree Avenue Bergen NY 14416 ■ **Phone** 1-800-543-2550 ■ **Fax** 1-585-494-1839 ■ **Email** Liberty@LibertyPumps.com ■ **Web** www.LibertyPumps.com*

1.01 GENERAL

The contractor shall provide labor, material, equipment, and incidentals required to provide _____ (QTY) centrifugal sewage pumps as specified herein. The pump models covered in this specification are LEH150-Series single or three-phase sewage pumps. The pump furnished for this application shall be model _____ as manufactured by Liberty Pumps.

2.01 OPERATING CONDITIONS

Each submersible pump shall be rated at 1.5 hp _____ volts, _____ phase, 60 Hz, 3450 RPM. The unit shall produce _____ GPM at _____ feet of total dynamic head.

The submersible pump shall be capable of handling 2" solids enabling pumping over long distances in pipelines as small as 2" in diameter. The submersible pump shall have a shut-off head of 70 feet and a maximum flow of 200 GPM @ 20 feet of total dynamic head.

The pump shall be controlled with:

_____ A piggyback style on/off float switch

_____ A NEMA 4X simplex control panel with three float switches including a high water alarm

_____ A NEMA 4X duplex control panel with three float switches including a high water alarm

3.01 CONSTRUCTION

Each centrifugal sewage pump shall be equal to the C SP US Certified LEH150-Series sewage pumps as manufactured by Liberty Pumps, Bergen NY. The castings shall be constructed of Class 25 cast iron. The motor housing shall be oil-filled to dissipate heat. Air-filled motors shall not be considered equal since they do not properly dissipate heat from the motor. All mating parts shall be machined and sealed with a Buna-N O-ring. All fasteners exposed to the liquid shall be stainless steel. The motor shall be protected on the top side with sealed cord entry plate with molded pins to conduct electricity eliminating the ability of water to enter internally through the cord. The motor shall be protected on the lower side with a dual seal arrangement. The first seal is a double lip seal molded in FKM fluoroelastomer or Buna-N. The second/main seal shall be a unitized graphite impregnated silicone carbide hard face seal with stainless steel housings and spring.

The upper and lower bearing shall be capable of handling all radial thrust loads. The lower bearing shall have the additional ability to handle the downward axial thrust produced by the impeller by design of angular contact roller races. The pump housing shall be of the concentric design thereby equalizing the pressure forces inside the housing which will extend the service life of the seals and bearings. The pump shall be furnished with stainless steel handle having a nitrile grip.

4.01 ELECTRICAL POWER CORD

The submersible pump shall be supplied with length of multi-conductor power cord, as per ***Electrical Data*** table. It shall be cord type SJOOW (1-phase) or type SEOOW (3-phase), capable of continued exposure to the pumped liquid. The power cord shall be sized for the rated full load amps of the pump in accordance with the National Electric Code. The power cord shall not enter the motor housing directly but will conduct electricity to the motor by means of a water tight compression fitting cord plate assembly, with molded pins to conduct electricity. This will eliminate the ability of water to enter internally through the cord, by means of a damaged or wicking cord.

Copyright © Liberty Pumps, Inc. 2026 All rights reserved. Specifications subject to change without notice.

*7000 Apple Tree Avenue Bergen NY 14416 ■ **Phone** 1-800-543-2550 ■ **Fax** 1-585-494-1839 ■ **Email** Liberty@LibertyPumps.com ■ **Web** www.LibertyPumps.com*

5.01 MOTORS

Single-phase motors shall be oil-filled, split-phase, capacitor start, Class B insulated NEMA B design, rated for continuous duty. Three-phase motors shall be polyphase. At maximum load the winding temperature shall not exceed 135°C unsubmerged. Since air-filled motors are not capable of dissipating heat they shall not be considered equal. Single-phase motors shall have an integral thermal overload switch in the windings for protecting the motor. Three-phase motors shall be used with an appropriate controller with integral overload protection. The capacitor circuit on single-phase motors shall be mounted internally in the pump. Single-phase motors shall have an integral solid state starting circuit switch for switching the start winding off.

6.01 BEARINGS AND SHAFT

An upper radial and lower thrust bearing shall be required. The upper bearing shall be a single ball/race type bearing. The lower bearing shall be an angular contact heavy duty ball/race type bearing, designed to handle axial pump thrust loads. Both bearings shall be permanently lubricated by the oil, which fills the motor housing. The motor shaft shall be made of 300 or 400 series stainless steel and have a minimum diameter of 0.670".

7.01 SEALS

The pump shall have a dual seal arrangement consisting of a lower and upper seal to protect the motor from the pumping liquid. The lower seal shall be a FKM fluoroelastomer OR Buna-N molded double lip seal, designed to exclude foreign material away from the main upper seal. The upper seal shall be a unitized graphite impregnated silicon carbide seal with stainless steel housings and spring. The motor plate/housing interface shall be sealed with a Buna-N O-ring.

8.01 IMPELLER

The impeller shall be a Class 25 cast iron semi-open 2 vane impeller, with pump out vanes on the back shroud to keep debris away from the seal area. It shall be screw mounted to the motor shaft with a bonding agent and jam nut.

9.01 PRESSURE SEWER APPLICATIONS

A redundant check valve assembly consisting of a curb stop and check valve must be installed between the pump discharge and the street main, as close to the public right-of-way as possible, on all pressure (force main) sewer installations to protect from system pressures. The curb stop valve is necessary to isolate the site from the pressure sewer while the check valve provides redundant protection against potentially detrimental backflow. All valves and fittings should be rated for at least 200 PSI service. See Liberty Pumps line of CSV-Series Curb Stop/Swing Check Valve Assemblies and CK-Series Connection Kit.

10.01 CONTROLS

All single-phase units can be supplied with CSA and UL approved automatic wide-angle tilt float switches. The switches shall be equipped with piggyback style plug that allows the pump to be operated manually without the removal of the pump in the event that a switch becomes inoperable. Manual pumps are operable by means of a pump control panel.

11.01 PAINT

The exterior of the casting shall be protected with powder coat or polyester paint.

12.01 SUPPORT

The pump shall have cast iron support legs enabling it to be a freestanding unit. The legs will be high enough to allow 2" solids handling.

Copyright © Liberty Pumps, Inc. 2026 All rights reserved. Specifications subject to change without notice.

7000 Apple Tree Avenue Bergen NY 14416 ■ ***Phone*** *1-800-543-2550* ■ ***Fax*** *1-585-494-1839* ■ ***Email*** *Liberty@LibertyPumps.com* ■ ***Web*** *www.LibertyPumps.com*

13.01 SERVICEABILITY

Components required for the repair of the pump shall be shipped within a period of 24 hours.

14.01 FACTORY ASSEMBLED TANK SYSTEMS WITH GUIDE RAIL AND QUICK DISCONNECT DISCHARGE

_____ Guide factory mounted rail system with pump suspended by means of thread-on quick disconnect which is sealed by means of nitrile grommets or O-rings. The discharge piping shall be Schedule 80 PVC and furnished with a check valve and PVC shut-off ball valve. The tank shall be wound fiberglass or roto-molded plastic. A cast iron or fiberglass inlet hub shall be provided with the fiberglass systems.

_____ Stainless steel guide rail

_____ Zinc plated steel guide rail

_____ Diameter of basin in inches

_____ Height of basin in inches

_____ Distance from top of tank to discharge pipe outlet in inches

_____ Fiberglass cover

_____ Structural foam polymer cover

_____ Steel cover

_____ Simplex system with outdoor panel and alarm

_____ Duplex system with outdoor panel and alarm

_____ Separate outdoor alarm

_____ Remote outdoor alarm

15.01 TESTING

The pump shall have a ground continuity check and the motor chamber shall be Hi-potted to test for electrical integrity, moisture content and insulation defects. The motor and volute housing shall be pressurized, and an air leak decay test is performed to ensure integrity of the motor housing. The pump shall be run at rated voltage to verify current, performance curve and monitor operation.

16.01 QUALITY CONTROL

The pump shall be manufactured in an ISO 9001 certified facility.

17.01 WARRANTY

Standard limited warranty shall be 3 years.

Copyright © Liberty Pumps, Inc. 2026 All rights reserved. Specifications subject to change without notice.

7000 Apple Tree Avenue Bergen NY 14416 ■ ***Phone*** *1-800-543-2550* ■ ***Fax*** *1-585-494-1839* ■ ***Email*** *Liberty@LibertyPumps.com* ■ ***Web*** *www.LibertyPumps.com*