



Installation  
and Operation  
Instruction  
Manual  
INSMAN-108

Centrifugal  
Separator

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# CENTRIFUGAL SAND SEPARATOR

## Installation

All Yardney Separators are designed for easy installation and operation. Larger units have self-supporting legs with holes for anchor bolts if needed. Inlet piping can be specified for either clockwise or counter-clockwise rotation at the time of order. Smaller units are shipped completely assembled ready for wall mounting (mounting hardware is optional), or optional stand mounting.

## Installation Parameters and Recommendations

1. **Concrete Pad (LA model only):** A minimum concrete foundation 12 inches wide by a length of 8 inches longer than the channel leg base should be placed under each leg. Many users prefer a full concrete pad under the width and length of the separator. For best performance, locate the separator where there is at least 3 feet of straight pipe run prior to the inlet and following the outlet connections. A lifting eye is supplied to assist in positioning the larger separators during installation. Installation of anchor bolts to secure the separator to the foundation is recommended.
2. **Wall Mount (V Model only):** The separator should be installed vertically with the optional mounting kit, stand, or similar hardware such as U-bolts sized to fit around the separator's body.

## Piping and Fittings

1. **Pipe:** Use Standard weight pipe fittings and radius elbows where required. **Do not use thin wall pipe or mitered fittings.** Mitered fittings can cause the separator to vibrate due to flow turbulence.
2. **Pressure Gauges:** Install pressure gauges on the inlet and outlet connections provided on larger units. Install pressure gauges in the process piping for smaller sized units. Pressure gauges will provide valuable information regarding separator performance during operation.
3. **Purge Valve Installations:** Use standard pipe fittings as required to adapt manual or automatic purge valves to the purge connection on the bottom of the separator. For automatic systems, an upstream manual ball valve and unions on either side of the automatic valve are recommended for servicing. Install the purge valve prior to elbows in the piping. Purge piping should not run uphill or have any low points where solids might accumulate. The purge line discharge should be to an atmospheric condition and should never be hooked into a pressurized line without contacting the factory first.

## Operation and Maintenance:

**System Operating Pressure Calculation:** A minimum of 15 PSI is required to operate the separator properly. Add to this the expected loss through the separator from the pressure drop curves. Add this to the required system operating pressure needed in your application. This will give you the overall system pressure requirement for pump sizing, etc. For example: 15 PSI to operate the separator properly, 7 PSI pressure-drop through the separator (from pressure drop curves), 50 PSI required to operate the balance of your system. Total pump pressure required is 72 PSI.

1. **Backpressure:** 15 PSI minimum
2. **Flow:** The Yardney Separator must be operated within its specified flow range for each respective model. Flow ranges above or below these recommended flow ranges will negatively affect performance. **Pipe sizing is not as important as sizing the separator to be within the proper specified flow range; this is critical for proper operation!**
3. **Freeze protection:** Always drain or protect the system from freezing. All associated pipe and separators within the system should be thoroughly drained from any residue of water to avoid damage due to ice expansion. Freezing of the unit can potentially cause irreversible damage to the separator and/or purge valve.
4. **Purging of Contaminants - Automatic:** Set the purge controller (see purge controller instructions) for frequent purges initially to avoid overfilling the collection chamber. Adjust the controller by operational experience to dictate the actual required purge frequency. Periodically verify proper operation of the controller and purge valve. Periodically check the purge valve for blockage. **If the unit is not purged frequently enough dirt carryover will be experienced and/or dirt compaction in the collection chamber may occur.**
5. **Purging of Contaminants - Manual:** Open the manual purge valve often initially to avoid overfilling the collection chamber. Operational experience will eventually dictate the actual required purge frequency. **If the unit is not purged frequently enough dirt carryover will be experienced and/or dirt compaction in the collection chamber may occur.**
6. **Purging - Continuous Bleed:** A partially opened purge valve provides for a trouble free means to continuously bleed off collected solids. Periodically check the purge valve for blockage. **If the unit is not purged frequently enough dirt carryover will be experienced and/or dirt compaction in the collection chamber may occur.**

In the event that the collection chamber becomes over filled and compacted and is unable to be cleaned out, depressurize the system and disconnect the purge piping. Manually flush the collection chamber using a pressure hose to wash out the dirt residue until clear and clean. Reconnect the purge piping and verify for proper operation. In units with collection chamber clean out ports, clean out can be accomplished through the clean out ports without disconnecting the purge piping.