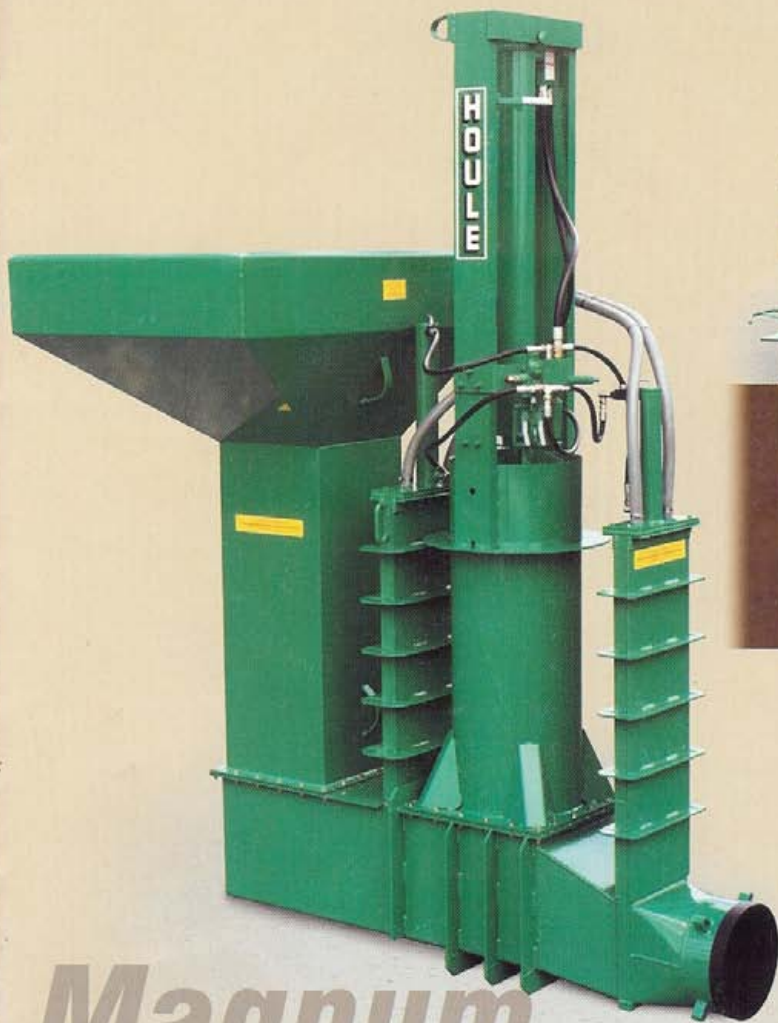


# UNDERGROUND MANURE PUMPS



*Magnum*

**HOULE**

*Systems proven for their  
outstanding reliability and efficiency.*



*Electromix*



*Futuro*

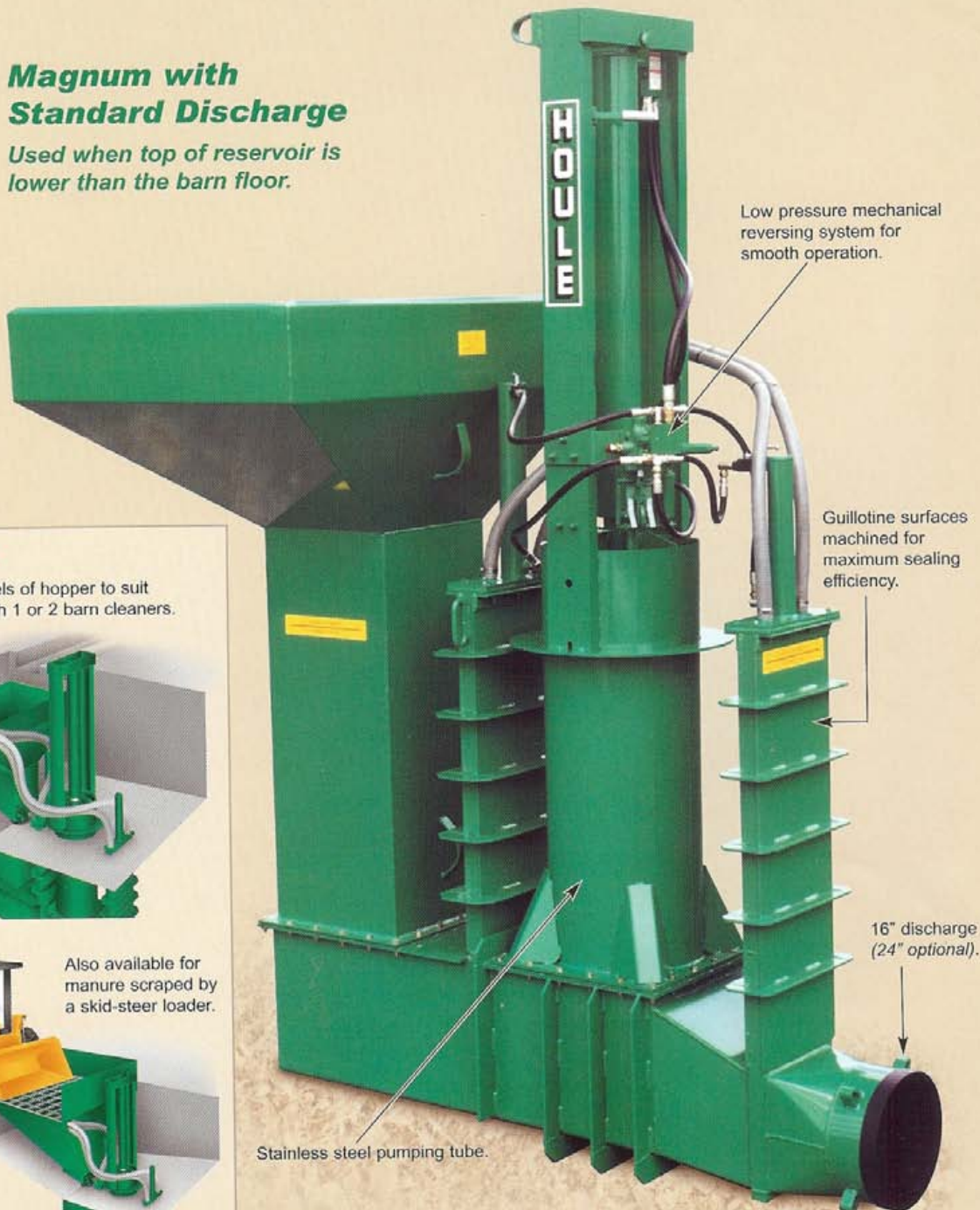
# Magnum

Field proven for over 25 years to evacuate dairy manure.\*



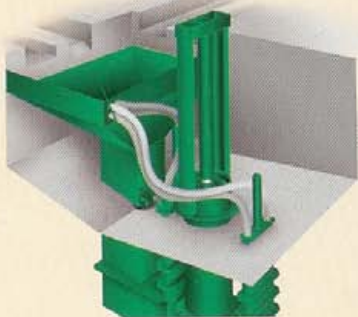
## Magnum with Standard Discharge

Used when top of reservoir is  
lower than the barn floor.



### Hopper

Different models of hopper to suit  
installation with 1 or 2 barn cleaners.



\*Water addition may be required. Straw bedding up to 40 lbs per 10 milking cows per day.  
Performance varies according to installation, manure consistency, quantity and type of bedding.

## Discharge Options to Prevent Manure Flow Back

With spring loaded guillotine  
and 16" manual safety  
guillotine valve at discharge.



For tied and free  
stall manure  
**without sand**  
when top of  
reservoir is higher  
than the top of  
the barn floor.



With spring loaded flapper  
and 16" manual safety  
guillotine valve at discharge.



For free stall  
manure  
**with sand**  
when top of  
reservoir is higher  
than the top of  
the barn floor.



## Working Principle

### Siphoning Cycle

During the siphoning cycle, the evacuation guillotine shuts down, the hopper guillotine opens, and finally, the piston siphons the manure from hopper.

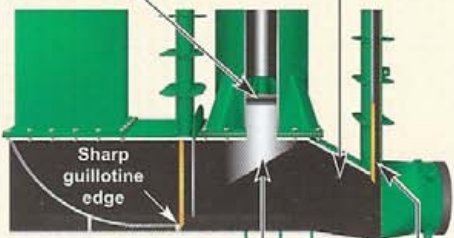
### Evacuation Cycle

During the evacuation cycle, the hopper guillotine closes, the evacuation guillotine opens, and finally, the piston pushes the manure into the evacuation line.

Oil-lubricated top seal with  
contact radius for maximum  
vacuum efficiency.

Lower seal that expands  
under pressure of manure.

Low-restriction  
evacuation  
chamber.



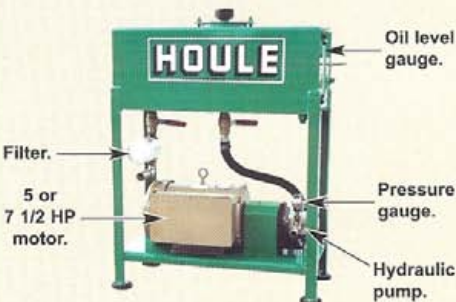
Sharp guillotine  
edge

Sharp  
guillotine  
edge.

Solid angled piston to make  
room in the evacuation  
chamber before siphoning.

## Power Unit

for Magnum, Futuro and Electromix System



Electric oil heater available.

# Futuro

Pump with large flapper valves actuated by pressure of manure to evacuate free stall slurry faster than the Magnum.\*



## Model with Hopper Installed in a Pit

Fed by a cross gutter or with a skid-steer loader. Different models of hopper available.



### Working

#### Siphoning Cycle

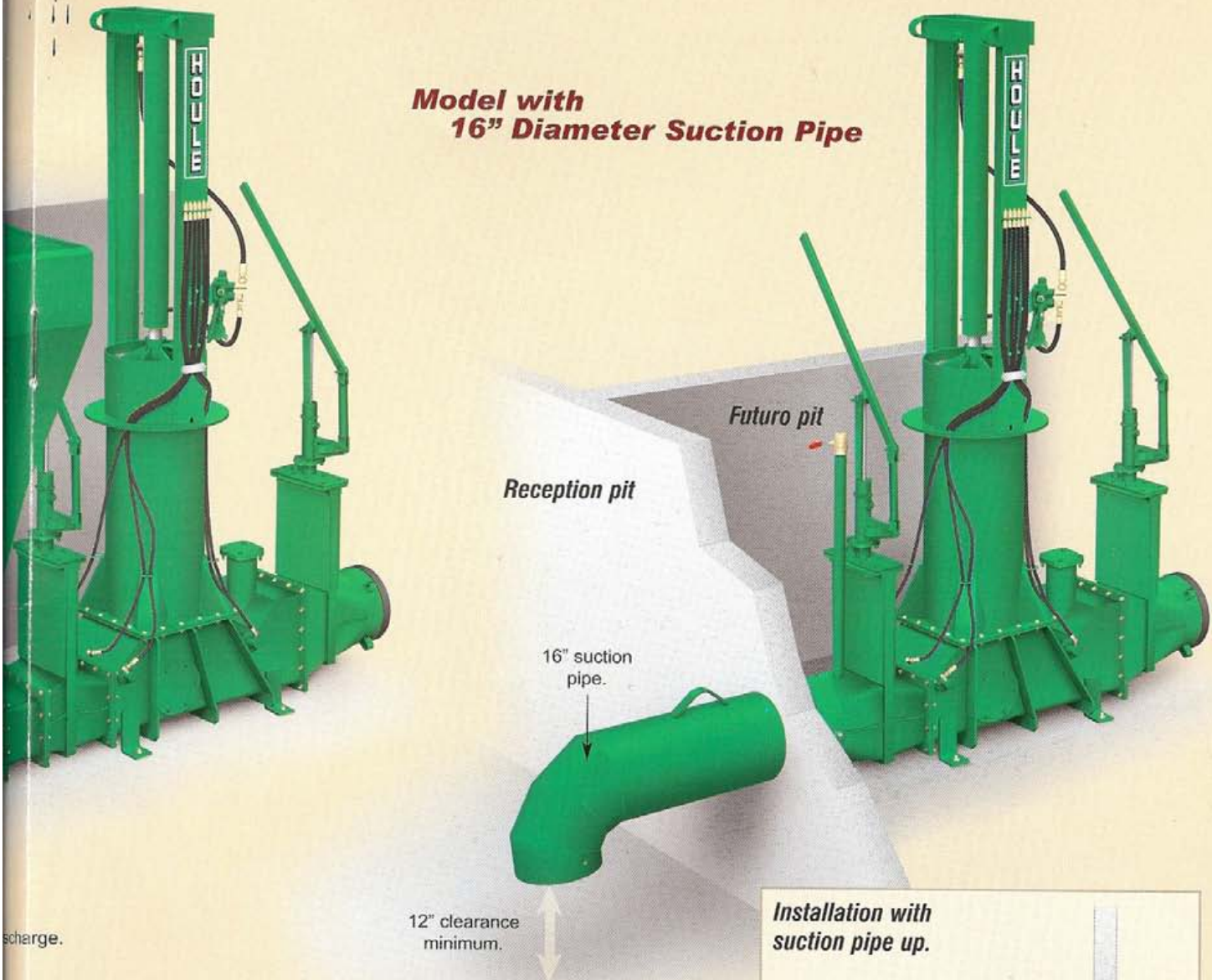
During the siphoning cycle, vacuum opens the siphon, the manual guillotine valve.

#### Evacuation Cycle

During the evacuation cycle, pressure closes the siphon, opens the spring flapper. At the end of the cycle, the spring flapper.

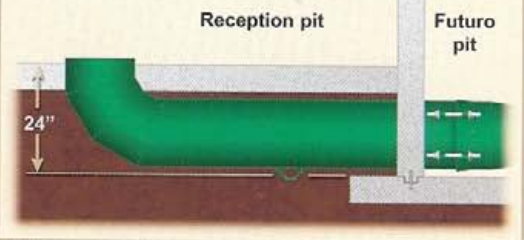
\*Water addition may be required. Performance varies according to installation, manure consistency, quantity and type of bedding.

**Model with  
16" Diameter Suction Pipe**



discharge.

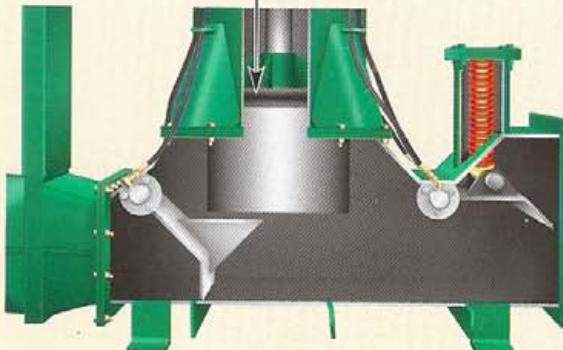
**Installation with  
suction pipe up.**



**Principle**

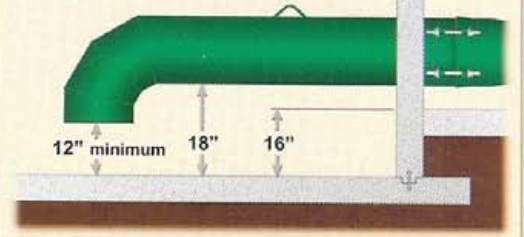
cycle,  
during cycle, the  
the intake flapper to  
manure into the pumping

Oil-lubricated top seal with contact radius for maximum vacuum efficiency.  
Lower seal that expands under pressure of manure.



cycle  
evacuation cycle, the  
the intake flapper and  
ing loaded discharge  
end of the evacuation  
ing closes the discharge

**Installation with  
suction pipe down.**



# Electromix System

**Tied Stall  
Free Stall** \*

Straw   Sawdust   Sand

*The Electromix System is designed to homogenize solid manure and liquid into a slurry that can be evacuated on long distances through small PVC pipe.\**

Low pressure mechanical reversing system for smooth operation.

Flapper shafts mounted on brass bushings and lubricated with remote grease lines.

The agitator is fully directional to ensure thorough agitation.

7.5 HP motor with belt drive.

3" hydraulic cylinder.

4" cylinder supplied with heavy duty system.

6" air damper.

6" gate valve at discharge.

12 feet diameter steel reception pit (1/4" thick).

Remote grease lines to lubricate the gearbox 3-seal mechanism.

90° heavy steel elbow to connect the PVC evacuation line.

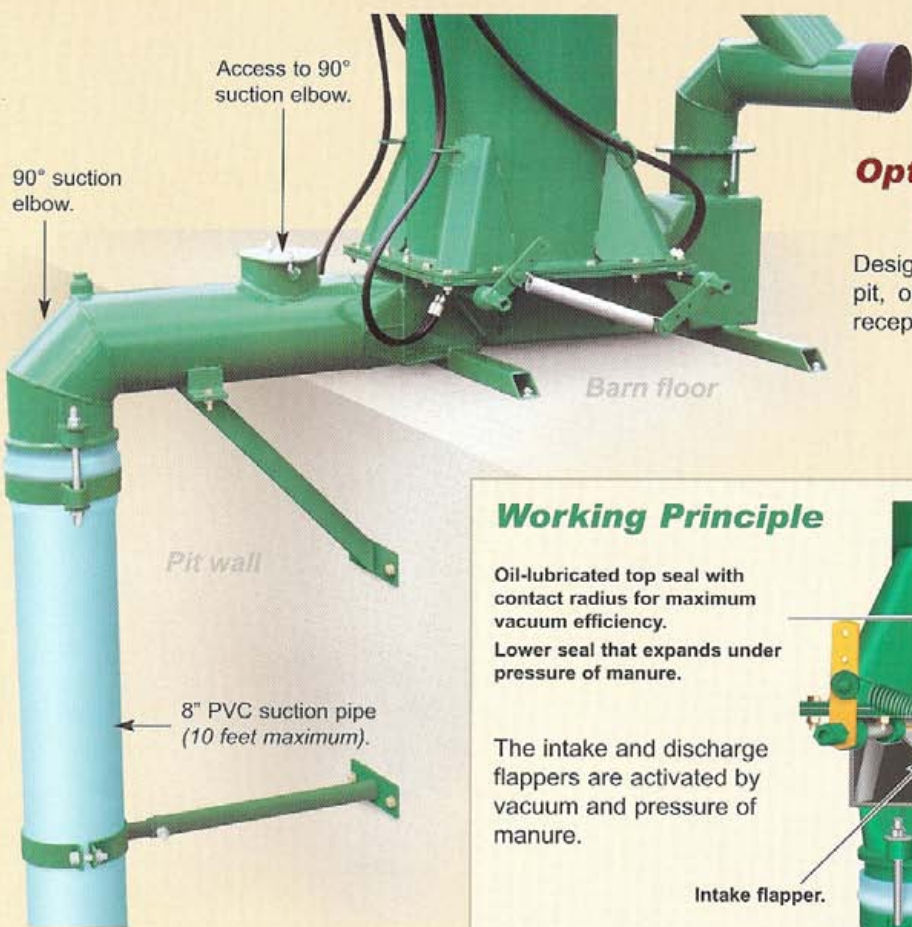
6" gate valve with insulated handle on liquid return line.

24" propeller with knife kit to shred long bedding.  
**Displacement:**  
 12,000 US GPM @ 300 RPM\*

*\*Liquid drawn from storage or grey water addition required. Straw bedding up to 40 lbs per 10 milking cows per day. Performance varies according to installation, manure consistency, quantity and type of bedding.*

### PVC Evacuation Line Requirements

Distance of Evacuation	Evacuation Line Diameter
Up to 200 feet	6 inches
Over 200 feet	8 inches



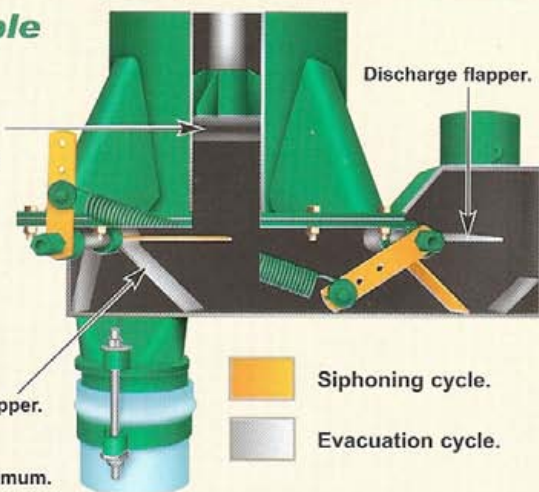
## Optional Floor Mount Base with 90° Suction Elbow

Designed for installation beside the reception pit, on the barn floor, or in a recess when reception pit is over 10 feet deep.

### Working Principle

Oil-lubricated top seal with contact radius for maximum vacuum efficiency.  
Lower seal that expands under pressure of manure.

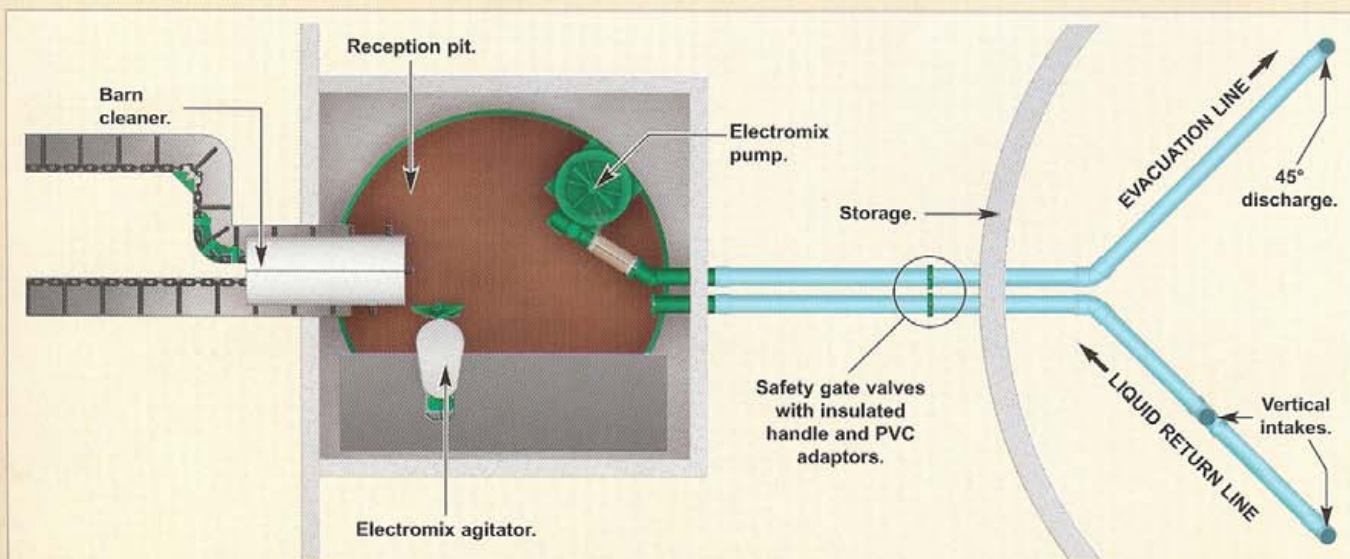
The intake and discharge flappers are activated by vacuum and pressure of manure.



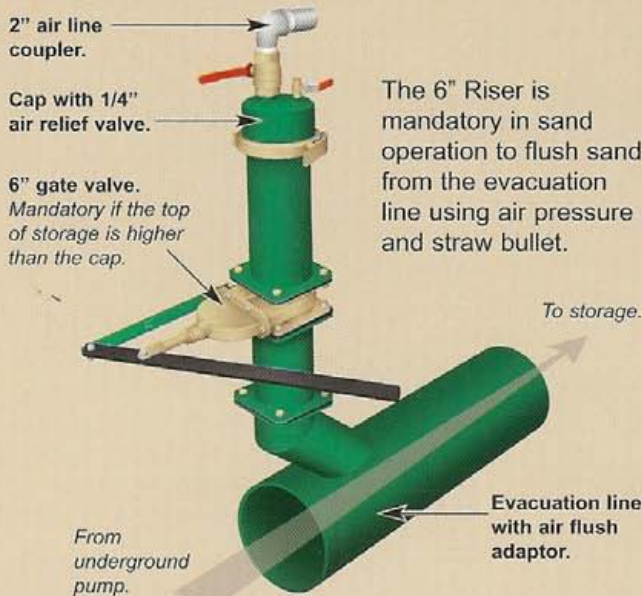
## Liquid Return Line

The liquid return line allows the drainage of liquid available from storage to the reception pit in order to minimize water addition, thus reducing the volume of storage.

Usually, the grey water (approximately 6 US gallons per cow per day) is sufficient to condition the manure when draining liquid back from storage. In some cases, with a proper quantity of grey water or urine, there is no need for the liquid return line.

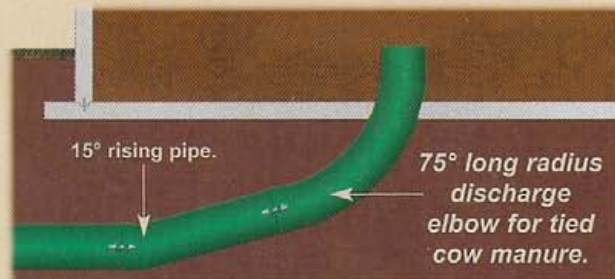
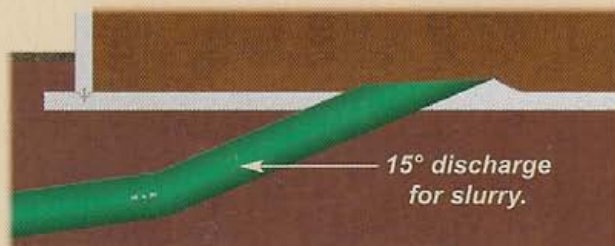


## 6" Riser for Air Flush



Available for 6 5/8", 8 5/8", 12 3/4" and 16" evacuation line.

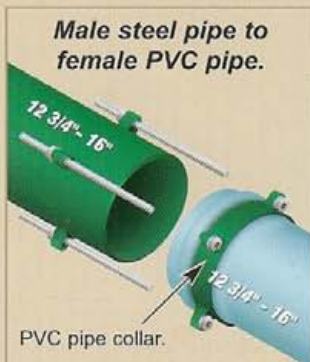
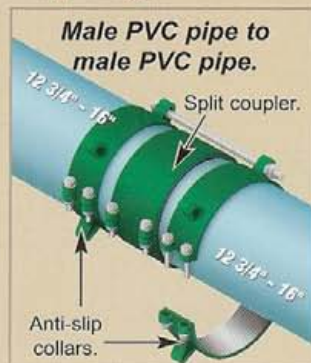
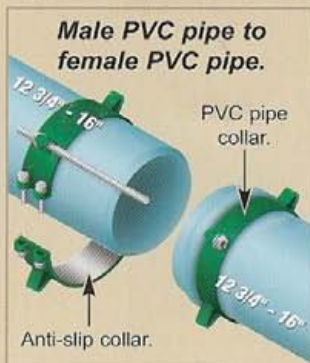
## Evacuation Line Discharge



Flapper valve for slurry.



## Evacuation Line Coupling



Steel equipment buried in corrosive soil must be protected with sacrificial anodes.

# HOULE

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Drummondville (Qc) J2B 6W3 Canada  
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