

# Futuro - Single Piston Pump

## OVERVIEW

To evacuate free stall manure containing limited amount of bedding.



The Futuro is a low power pump with hydraulically driven piston. The large flapper valves inside the evacuation chamber are pressure actuated to evacuate dairy manure through underground line. The flapper valves design and the Futuro heavy-duty manufacturing allow handling manure containing limited amount of bedding such as sand, sawdust, wood shavings and chopped straw. The Futuro pump can be equipped with either a hopper inlet to collect manure from a cross gutter cleaner or from a skid-steer loader or it can be equipped with a suction pipe to be gravity fed. Find out more about what makes the Futuro hydraulic piston pump one of the most reliable equipment offered by GEA.

### Key Features

- Available motors: 5 or 7.5 HP (5.5 or 3.7 kW).
- Stainless steel pumping tube.
- Low pressure mechanical reversing system for smooth operation.
- Stainless steel flapper shafts mounted on brass bushings and lubricated with remote grease lines.
- Down stroke lever on the intake flapper to ensure it is fully closed.
- Spring housing on discharge flapper to keep it closed during siphoning cycle.
- Manual intake and discharge guillotine valves bolted on both ends of the pump. Guillotine valves also available with hydraulic cylinders.

- Access to the evacuation chamber.
- Easy access to the remote grease lines on top of the pump.
- The pump can be installed to start automatically or manually by means of a control panel.
- 12¾" (324 mm) or 16" (406 mm) discharge.

#### Application

Evacuates liquid dairy manure of a consistency between ¼" (6 mm) and 1½" (38 mm) from free stall barn up to the main storage through underground line.

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

#### Futuro Models

- Installed in a service pit with a hopper - a hopper is fixed to the intake of the pump when the pump is to be fed by a scraper installed in a gutter or by a skid-steer loader.
- Installed with a suction pipe - a suction pipe is fixed to the intake of the pump when the pump is to be gravity fed from a reception pit.

#### Working Principle

During the siphoning cycle (piston up stroke) the vacuum effect and pressure of manure force the discharge flapper to close and the intake flapper to open which fills the evacuation chamber with manure.

During the evacuation cycle (piston down stroke) the pressure forces the intake flapper to close and the discharge flapper to open to transfer the manure from the evacuation chamber to the discharge line.

A manual guillotine shut-off valve on the intake and discharge prevents flow back through the pump when not in use and isolates the pump for maintenance. A hydraulic control for the guillotine valves is available in option.

#### Hydraulic Power Unit

- 5 or 7.5 HP (5.5 or 3.7 kW).
- Electric oil heater available.

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