

CLIPTON PUMPEN™

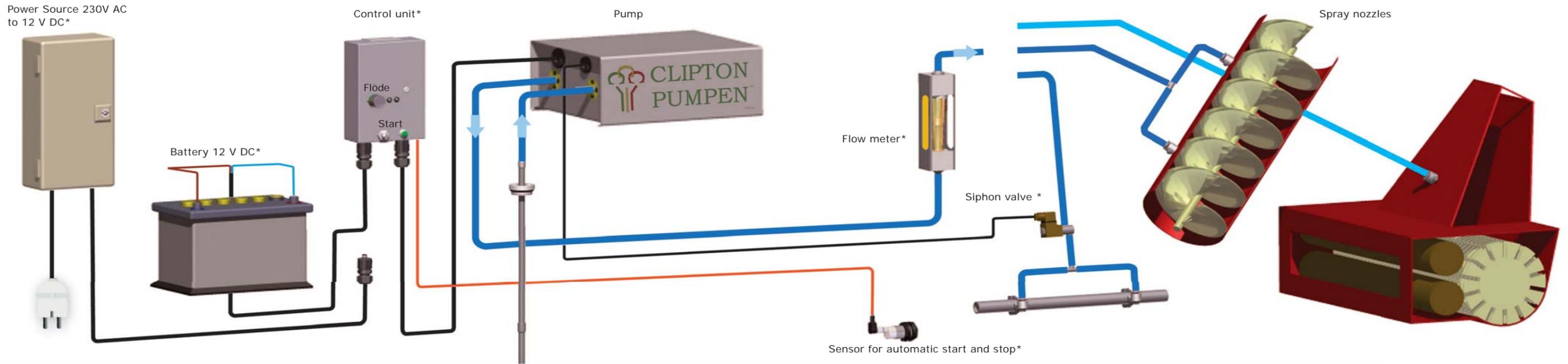
A Flexible System



CLIPTONPUMPEN™

- For ensiling agents and acid preservation
- For all types of machinery
- Large range of accessories
- Easy to use
- Easy to adapt

Easy to fit - regardless of the machine



Regulation

Flow

Control

Application

Control Unit

The control unit is suitable for both pump sizes and provides variable control for the amount of flow from 0.5 to 7 litres per minute for the smaller pump and 3.0 to 14 litres for the larger one. Start and stop are manual. The control unit can be complemented by a sensor (P0202) for auto-matic start and stop. The control unit must always be protected from damp, dust and strong vibrations. The pump and control unit are easily attached to the machine console (P0324). Connect the control unit directly to the tractor's / machine's 12 V battery via both poles (+ &-) of the battery cable to avoid irregularities in the power supply.



Control unit (P0332) with sensor (P0202)



Machine consol (P0324)

Power source 12 V DC*

A mains unit that converts 230 V AC to 12 V DC is preferable if the pump is permanently fixed e.g. for grain preservation. You can read more about the automatic grain control device on page 8.



Power source 230V → 12V DC (P0203)



Automatic Grain Device 380 V (P0205)

Pump

Position the pump adjacent to the container to facilitate suction. The recommended suction hose length is max. 2 metres. Well-tightened hose clips at all hose connections are important both from a work safety viewpoint and for the suction capacity of the pump.



Suction pipes, extension pipes and (lid) grommet



(P0321-1)

(P0322-1)

Carrier*

Carriers for 30 L can (P0201) and 200 L drum (P0209) are positioned at a low level to make changes or refills easier.



Carrier for 30 L can (P0201)



Drum (P0209)

Flow meter*

The flow meters (P0210 & P0213) have replaceable scales for ensiling agents of differing densities (=kg/lit).

(P0210) for measurements within 0.5 to 8 l/min

(P0213) for measurements within 3.0 to 15 l/min



There are various sizes of flow bodies and measuring pipes for flow meter 210

Siphon Valve*

Siphon Valve (P0329 & P0329-1) effectively stops the siphon effect, something that can occur if, for example, the container is positioned higher than the nozzles.



Spray Nozzle

For the pumps, there are five different spray nozzles to meet the requirement of mower crushers, self-loading wagons, balers chopping fans and grain screws.

Deflector spray nozzles are recommended for balers and self-loading wagons. These are positioned by the pick-up during feeding. The number and size of nozzles, and the distance between them, are determined by the width and thickness of the grass stems and the intake capacity of the pick-up.

A practical tip before permanent attachment on the pick-up is to secure the nozzles temporarily, as this makes it easier to make adjustments. Another tip is to weld the nozzle securely to a U-clip. This makes subsequent adjustment easier. However, this requires there to be a pipe to fix the U-clip to at the front of the pick-up.



By attaching the nozzle to a U-clip, the position can be adjusted afterwards for optimal spraying.

Correct dosage and spraying

Control Unit

CE-marked

The pump is tested and CE-marked. The control unit and other electrical equipment complies with EMC norms EN50081-1 and EN50081-2, EN55011B, EN50082-1 (EN61000-4-2, -3, -4, level 3)

Warning indicators

A light and sound indicator always warns the user if the pump is operating with no fluid in it (running empty). This is combined with the fact that the pump simultaneously runs at maximum speed until both the pump and pressure hose are again completely filled with fresh fluid.



If the pressure exceeds 4 bar, e.g. if the nozzle is too small or a pressure hose is twisted, the pump stops automatically with both warning indicators (light and sound) having been activated.

If there is a drop in voltage or any other electrical fault, the green on light, flashes or goes out.

Correct dosage

To be able to apply the correct amount per ton of green fodder or per ton of fodder grain, a dosage table, a scale and a flow meter are required. If you do not have a flow meter, a clock and a one-litre measure can be used instead.

Ensilage

Start by estimating the amount of green fodder in the wagon (e.g. 5 ton) or round bale (e.g. 600 kg). Then estimate the actual time for collecting the green fodder in the wagon (e.g. 10 min) or the round bale (e.g. 2 min). Check what the dosage table specifies in litres ensiling agent per ton green fodder and dry matter content. For clover, 4 litres Promyr per ton at 30 % dry matter content is recommended. To be able to correctly adjust the flow meter, follow the calculation formula below

$$\text{Formel: } \frac{\text{Weight} \times \text{litre per ton}}{\text{Time in minuter}} = \text{litres/minut}$$

$$\text{Example: } \frac{5 \text{ ton} \times 4 \text{ litres}}{10 \text{ minutes}} = 2 \text{ litres/minut}$$

Grain preservation

Follow the same calculation formula as above, but replace the dosage table with the one for *Propionic acid*

Nozzles

Deflector sprayer	Fan sprayer
	
TK 2 = 0,5–1,0 lit/min TK 3 = 0,6–2,0 lit/min TK 5 = 1,0–3,0 lit/min	8020 = 1,0–4,0 lit/min 8050 = 2,0–7,0 lit/min 1501 = 2,0–9,0 lit/min

The flow range specified in the illustrations indicates the lowest and highest flow with an even spraying angle. TK 2/TK 3/TK 5 are deflector spray nozzles. 8020 and 8050 are fan spray nozzles that have a narrower spraying angle and spray straight ahead.

Complete Nozzles

Deflector spray nozzle TK 2	Item no. P0312
Deflector spray nozzle TK 3	Item no. P0314
Deflector spray nozzle TK 5	Item no. P0313
Fan spray nozzle set 8020	Item no. P0310
Fan spray nozzle set 8050	Item no. P0311
Fan spray nozzle set 8050 without pressure valve	Item no. P1501

A nozzle is composed of the following parts :

- Nozzle body (P0306)
- Nozzle holder (P0305)
- Ball-bearing + Spring that opens at 0.2 bar pressure
- Nozzle (TK 2 / TK 3 / TK 5 / 8020 / 8050)

Nozzles

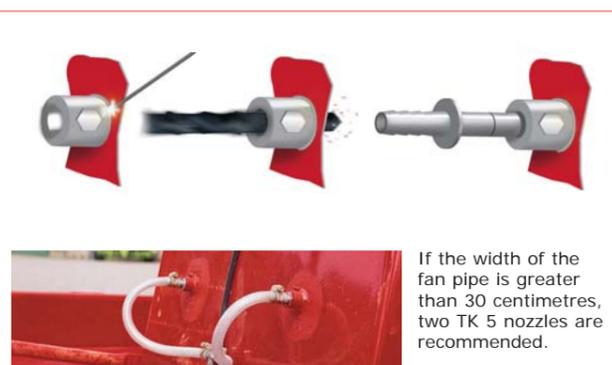
Deflector spray nozzles TK 2, TK 3 and TK 5 can produce a spraying angle of up to 160°. They can be used for mower crushers, self-loading wagons, round balers, precision choppers, etc. Fan spray nozzle set 8020 is recommended in the first instance for grain screws.

Practical tips

Positioning of the nozzles

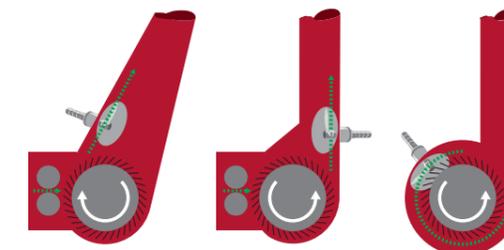
Precision choppers and stationary choppers

The nozzle includes a nozzle holder (P0305), which should be welded onto the fan pipe. Then drill a hole (12 mm) right through the nozzle holder and the fan pipe. Incorrectly fitted nozzles can result in the green fodder remaining untreated.



If the width of the fan pipe is greater than 30 centimetres, two TK 5 nozzles are recommended.

Precision choppers and stationary choppers may have different directions of rotation on the impeller. The position and number of the nozzles is therefore of great significance in achieving an even mix. One tip is to fit the nozzle adjacent to or near the impeller with spraying in the same direction as the green fodder.



NB! Remember to fit the nozzle correctly in relation to the direction of rotation.

Square and round balers

On machines with no fan pipes, e.g. large balers, the pump set called the round baler pump (P0130) with the double deflector spray nozzle (TK 2) is recommended.

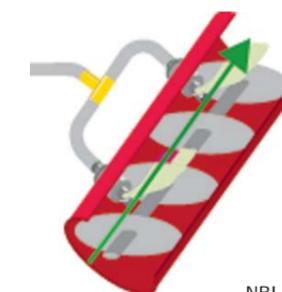
Deflector spray nozzle



Grain screw/crusher

The number of fan spray nozzles (P0310/P1501) and their positions on the conveyor screw are important. An uneven mix and/or too small a dose can produce a negative preservation result. The length of the conveyor screw should be at least three metres from the position of the nozzles at the outlet. At least two nozzles are always recommended. If the conveyor screw is five inches in diameter (= capacity greater than 10 ton/hour) or larger, at least three nozzles are recommended.

Conveyor screw



NB! Only spray nozzles for conveyor screws.

Standard sets / Accessories / Spare parts list /

Standard sets

- Additive pump 7 L/min, (1 x TK5)
Item no. P0100-GB-01
- ◇ Rund bale additive pump 7 L/min, (2 x TK2)
Item no. P0130-GB-01
- Grain additive pump 7 L/min, (2 x 8020)
Item no. P0160-GB-01
- △ Additive pump 14 L/min, (2 x 1501)
Item no. P1500-GB-01

Nozzles

-  Fan spray nozzle set 8020
Item no. P0310
Part of set: ○
-  Fan spray nozzle set 8050
Item no. P0311
-  Fan spray nozzle set 8050 (without pressure valve)
Item no. P1501
Part of set: △
-  Deflector spray nozzle set TK2
Item no. P0312
Part of set: ◇
-  Deflector spray nozzle set TK3
Item no. P0314
-  Deflector spray nozzle set TK5
Item no. P0313
Part of set: □
-  Nozzle body
Item no. P0306
-  O-Ring, Nozzle body
Item no. P0403

-  Ball-bearing
Item no. P0405
-  Spring
Item no. P0406
-  Fan spray nozzle set 8020
Item no. P0301
-  Fan spray nozzle set 8050
Item no. P0302
-  Deflector spray nozzle TK 2
Item no. P0303
-  Deflector spray nozzle TK 3
Item no. P0307
-  Deflector spray nozzle TK 5
Item no. P0304
-  O-Ring (for all nozzles)
Item no. P0409
-  Nozzle holder
Item no. P0305

Pump equipment

-  Pump 14 l with protective cover
Item no. P1517-01
Part of set: △
-  Pump 7 l med hölje och kabel
Item no. P0340-01
Part of set: □◇○
-  Machine onsole
Item no. P0324
Part of set: □◇○△
-  Pump Cable, 8 m (for P0340-01 / P1517-01)
Item no. P0331

-  Membrane pump (12 V DC 14 l/min)
Item no. P1507-01
-  Valves
Item no. P1505
-  Membrane
Item no. P1506
-  Cam with bearing
Item no. P1521
-  Hose nipple 90°
Item no. P1522

-  Membrane pump (12 V DC 7 l/min)
Item no. P0364
-  Nipple 90°
Item no. P0530
-  Ventilsats
Item no. P0505
-  Membran
Item no. P0506
-  Kam med lager
Item no. P0511

Control unit

-  Control unit
Item no. P0332
Part of set: □◇○△
-  Circuit board
Item no. P0383
-  Machine console
Item no. P0324
Part of set: □◇○△

-  Cabel connector (battery cable) female
Item no. P0476
-  Cabel connector (pump cable) male
Item no. P0477

-  Chassis connector (pump-out.) female
Item no. P0553
-  Chassis connector (battery-in.) male
Item no. P0554

-  Automatic control unit (start / stop)
Item no. P0202
-  Power source 230V → 12V DC
Item no. P0203

-  Battery Cable, 3 m
Item no. P0330
Part of set: □◇○△

-  Automatic grain control device 380 V, 5.5 Kw
Item no. P0205
-  Y/D start (till P0205 över 5.5 kw)
Item no. P0206

Hose and sprayer accessories

-  Hose 10X3 (3/8")
Item no. P0540
Part of set: □◇○
-  Hose 12x3 (1/2")
Item no. P1518
Part of set: △

-  Quick-release coupling, female, PP
Item no. P0950

-  Quick-release coupling, male, PP
Item no. P0951
-  O-Ring
Item no. P0952

-  Hose clip 11-17 mm
Item no. P0433
Part of set: □◇○△
-  Hose clip 13-20 mm
Item no. P0434
Part of set: □◇○△

-  Can carrier (for 30 L dunk)
Item no. P0201

-  Drum carrier (for 200 L fat), unmounted
Item no. P0209

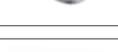
-  Lock Can lid (for 25 L Can), bearbetade
Item no. P0366-1
Part of set: □◇○
-  Drum lid (for 200 L Drum), bearbetade
Item no. P0365-1
Part of set: □◇○△
-  Container lid (for 1000 L IBC) bearbetade
Item no. P0367-1
Part of set: △

-  Suction pipe for can
Item no. P0321-1
Part of set: □◇○
-  Suction pipe for can
Item no. P0321-2
Part of set: △

-  Extension pipe (drum-container)
Item no. P0322-1
Part of set: □◇○△
-  Hose nipple (till P0321-1)
Item no. P0454

-  Hose nipple (till P0321-2)
Item no. P0454-1
-  Lid grommet
Item no. P0323-1
Part of set: □◇○△

-  Check valve
Item no. P0425-1
-  Spacer
Item no. P0427-1

-  Filter pad
Item no. P0424
-  Lock ring
Item no. P0422

-  Three-way intersect
Item no. P0326
Part of set: □◇○△

-  Four-way intersect
Item no. P0328

-  Magnetic valve siphon (8 m kabel) Max 7 liter/min
Item no. P0329

-  Magnetic valve siphon (8 m kabel) Max 15 liter/min
Item no. P0329-1

Flow meter

-  Flow meter 0,5-8,0 l/min
Item no. P0210

-  Measuring pipe (0,5-2,0)
Item no. P0805

-  Float body (0,5-2,0)
Item no. P0807

-  Measuring pipe (2,0-8,0)
Item no. P0806

-  Float body (2,0-8,0)
Item no. P0808

-  O-Ring, small measuring pipe
Item no. P0810

-  O-Ring, large measuring pipe
Item no. P0809

-  Flow meter 3,0-15,0 L/min
Item no. P0213

-  Measuring pipe (3,0-15,0)
Item no. P0816

-  Float body (3,0-15,0)
Item no. P0817

Protective equipment

-  Protective equipment
Item no. P0369
Part of set: □◇○△

(Items spare part/Accessories is grouped in same frame.)



Clipton Pumps (P0160/P1500) are suitable for both acid preservation and ensilage of damp fodder grain and fodder peas/beans. For stationary use, the pumps can be equipped with an automatic grain control device (380 V) or a mains unit (230 V), both of which can convert the voltage to 12 V DC.

The automatic grain control device (P0205) is also equipped with a flow meter and two sensors. One sensor (P0974) is attached to the flow meter for monitoring the pump flow in litres per minute. The other sensor (P0960) is attached to the bottom section of the conveyor (380 V) screw by the trough, in order to indicate whether there is fodder grain for the conveyor screw. When one of the sensors indicates a deviation, both the pump and conveyor screw will stop automatically. If the conveyor screw's power requirement is more than 5.5 kW, it must be supplemented with a Y/D start (P0206). This is fitted inside the automatic grain control device.

For acid preservation, follow the recommendations and dosage tables of the preparation manufacturer.

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<p>Manufacturer</p>  <p>Vejby Byaväg 10 260 83 Vejbystrand Sweden www.clipton.com</p>	<p>Dealer</p>
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