INSTRUCTION MANUAL

DANA api Matic 1000

Prod. 110040

Thank you for purchasing a Swienty product. For optimal use and to ensure a long lifetime, please read this manual carefully. Should you have furhter questions in regards to this product, please contact us.

Technical Data

Type of machine:	Computer controlled gear pump
Filling range:	10 g - ∞ g
Measuring units:	ml/g/oz
Pump capacity:	Approx. 200 kg/h (honey)
Precision:	+/- 1%
Power:	230V/50Hz 120V/60Hz model on request
Powerconsumption:	115W
Soundlevel:	Bellow 70dB(A)
Weight:	Approx. 12 kg
Dimensions:	22 x 31.5 x 18 cm
Connections:	1 1/2" BS -> 1 1/2" hose
Item#:	110040
Tariff code:	8422 3000
Packaging:	1 pcs
Accessories included:	Fittings elbow $1^{1/2}$" BS, Foot pedal, 1,5m hose $1^{1/2}$", rubber feet, dosing syringe, cut-off-cross complete.
Accessories seperate:	Various fittings, various nozzles, different tanks and creamers, stand for the table or floor, funnel, switch for stand.

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for better honey

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Contents

Read before use

This instruction manual is the original Swienty A/S instruction manual for DANA api Matic 1000. The purpose of this instruction manual is to ensure correct handling, use and maintenance of the filling machine.
The instruction manual is to be placed in a place where it is easily accessible to the users of the machine and the people entrusted to carry out maintenance work.
It is solely the responsibility of owner of the filling machine to ensure that every person handling or servicing the machine has read the instruction manual.
Furthermore it is the responsibility of the people handling and servicing the machine to read the instruction manual.

Before the machine is taken into use it is important to ensure that the machine is placed on a stable surface and the wheels are locked in order to keep it from rolling. The machine should be placed in a room with good lightning.
This ensures safe and proper handling of the machine. The cord of the machine (230V) is to be placed so it minimizes the chance for people stumbling over the cord during operation, cleaning and maintenance work etc.
The machine is never to be left unattended during use.

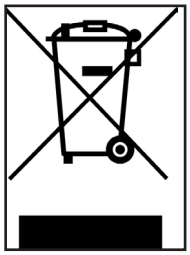
The product is governed by directive 2002/96/EF about trash of electronic and electronic equipment(weee).
The product must not be discarded with unsoreted household. Instead use the locale weee pickup point for discard of this product and make sure all relevant locale provisions are complied.

-Never use the pump with substances hotter than 50 degree celcius, this can lead to excessive wear.
-Never remove the pumphouse without turning off the power as this may lead to exposure of moveable parts.
-Never let the pump run dry, as this may lead to damage on the sealing
-Dont connect the power plug before hose pipe and antidrip fittings has been mounted, as this may lead to exposure of moveable parts.
-The pump housing must only be opened by a qualified technician.
- The pump should only be used for honey and similar substances. If in doubt contact Swienty
-The machine should always be used under observation, do not leave it alone.

This device complies with the following directives:

CE

EMC 2004/108/EC
MD 2006/42/EF



WEEE 2002/96/EF
RoHS 2011/65/EC

Description

DANA api MATIC 1000 is a filling machine equipped with a gear pump. A gear pump is operated by a powerful direct current motor using a planetary gear. The motor is controlled by an electronic based microprocessor which ensures a perfect drip-free function.

The filling weigh is digitally displayed and can be set for amounts from 10 g - ∞ g. If you are using different measurement units, see the conversion table on page 28. Up to 10 filling programs can be stored containing the weigh, the calibration factor and the filling parameters. The machine operates with great precision and can easily be calibrated to suit different types of liquids. As a pump, the machine can operate equally well in both directions and can work with different velocitys.

All parts that come in contact with the liquid to be filled are constructed of either stainless steel or food grade plastic. They are easily taken apart and cleaned.

Never leave the machine unattended during use.

Packing list DANA api MATIC 1000

Number	Description	Amount
110110	Fitting bent BS 1,5"	1 pc.
110058	Rubberfoot	4 pcs.
110075	Footpedal comlpet	1 pc.
110065C	Cutoff-cross Ø20 complete	1 pc.
110165	Hose 1,5"	1,5 m
115815	Dosing syringe 0-60ml	1 pc.
210040	Dana api Matic 1000	1 pc.
500110F	Hexnut BS 1,5"	1 pc.
810052	Instruction Manual	1 pc.
110074B	Sparepart kit O-Rings DAM1000	1 pc.
110070A	Silicone diaphragm w. 3 holes disc	1pc.

Operation

Prime the pump head before operation and connect it to the liquid to be filled/pumped using the hose and fitting delivered with the machine. If the liquid is highly viscous, we recommend upgrading to a 2" hose. 2" fittings are available at Swienty. Before use please make use that the machine is placed on a stable surface. In order to ensure trouble-free filling, the liquid should always be placed above or at least at the same hight as the filling head. The machine is activated by connecting the plug to a 230/110V supply.

It is also possible to see a video exposition of the machine by scanning the QR code on the front page with you phone or tablet.

Key overview

[Start] Starts filling cycle or pumping.

[Stop] Stops the motor immediately, so the filling- and pumping operation is interrupted. Also functions as a return-button.

[Calib] Activates the calibration of the filling weight in the current program.

[Pump/u-d] Indicates the pumping direction. Direction can only be switched when motor is off-state.

[Speed] Activates the speed regulator of the motor.

[Antidrip] Prevents dripping.

[Progr.] Activates the program options.

[Fill/Pump] Switches between filling and pumping mode

[Menu] Opens up for new settings and data.

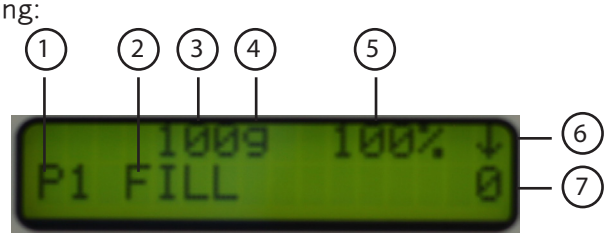
[+] Enlarges the set up data and displays the following data respectively.

[-] Reduces the set up data and displays the previous data respectively.

[Enter] Confirms the displayed data and saves it.

The Display

When the filling machine is connected to the power supply, the display shows for instance the following:



1: Shows the program number which has been used when filling last time.

2: Shows if the machine is set to pump or fill. In this case fill.

3: Shows the filling weight which has been used when filling last time.

4: Shows the base unit which has been used last time (g, oz, ml).

5: Shows the speed of the motor in %.

6: Shows the pumping direction.

7: Shows the number of fillings. Starts a new at 0 when having switched the machine off and on again.

Anti-drip operation

When working with tenacious liquids like honey, dripping is likely to occur. To avoid it, a special rubber nozzle has been developed.
After having finished the filling process, the motor reverses. In that way, a small amount of the liquid is sucked back. This amount depends on the liquids consistency.
To change the anti-drip, push the **[Antidrip]** button. The number on the display blinks. It indicates the number of impulses the motor turns back. With the help of the buttons **[+]**/**[-]** you modify the number, then you confirm with **[Enter]**. If the number is too small, it will drip, if the number is too high, the nozzle will suck in too much air. When filling next time the air will be pressed out with a noisy sound.

Speed regulation of the motor

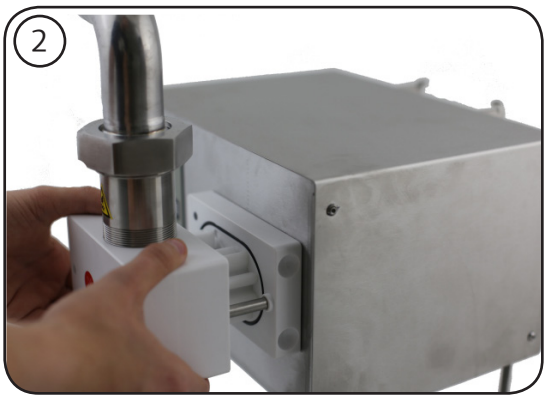
There are various applications for which it is necessary to be able to regulate the pumping capacity and consequently the speed of the motor. Push the **[Speed]** button. The speed indication blinks. By pushing the **[+]**/**[-]** buttons you can set up the percental speed you desire. Confirm with **[Enter]**.
The setting up is made in intervals of 5%.
The speed regulation can also be carried out while you are filling or pumping.

Pumping

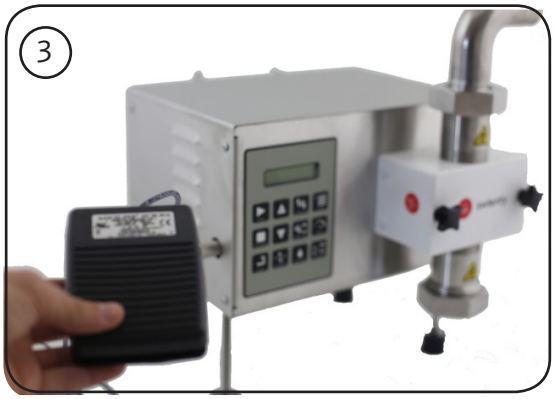
If you wish to use the machine as a pump, push the **[Fill/Pump]** button. If you want to change the direction, press **[Pump/u-d]**. The arrow on the display now points into the other direction. Now press start **[Start]**. The filling line starts at 0 and than counts upwards. To stop the pump, press **[Stop]**. The pumped amount is blinking on the display.
If you wish to continue pumping, press **[Start]** and the amount continues to count.
As soon as you want to start over again, press **[Stop]** again, afterwards **[Start]**.

Preparing the machine

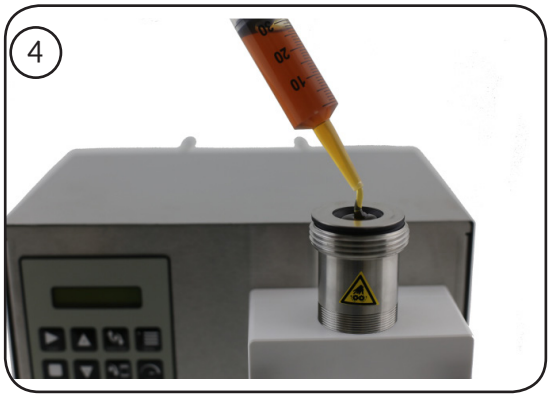
Clean the pump head. For more information see 3.9.



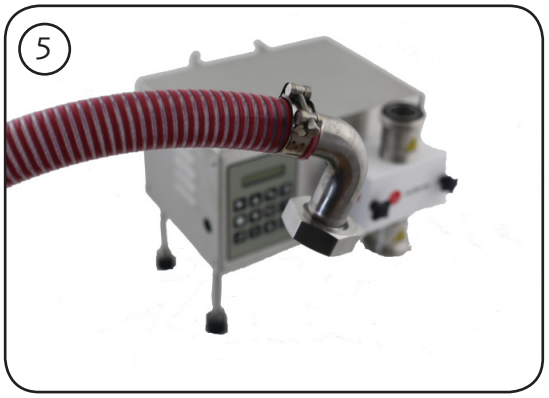
Mount the pump head on the machine and make sure that the machine is placed on a stable surface.



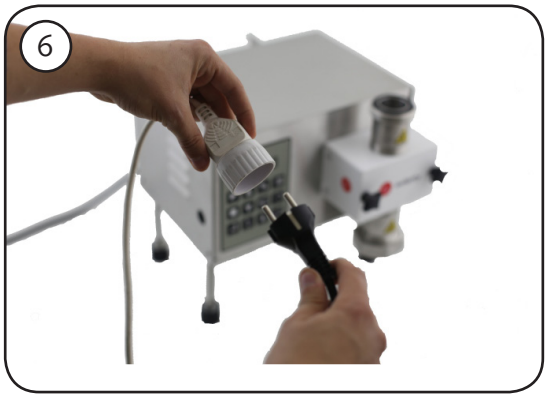
It is possible to connect a foot switch.



Seal the pump head with the liquid you want to dose. Fill it to the edge.

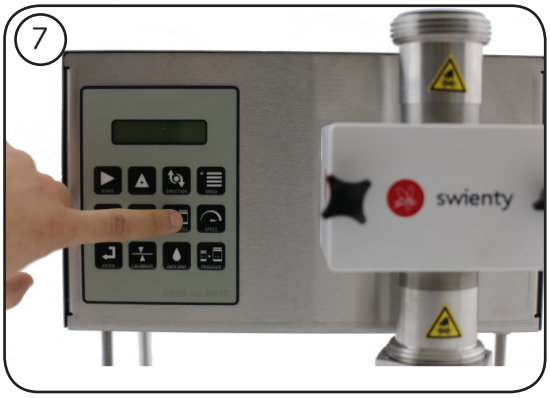


Mount the hose onto the fitting on top behind the bulge on the fitting. Control the hose afterwards for eventual holes, which can lead to air in your honey!



Plug in the power. The machine cord (230V) is to be placed so it minimizes the chance for people stumbling over the cord during operation, cleaning and maintenance work etc. Attention never connect the power before the hose connections and anti-drip is attached.

7



Set the machine to pump by pushing the button [Pump/Fill]. Pump in 1-2 sec and fill up the pump head again.

8

Tip: Swienty recommends that the container is above the pump head for optimum use. The funnel is recommended when filling small batches.

9

Connect the hose to the container and pump.

10

The tightening can be done without any tools. Hold onto the union (red arrow) with left hand and the bending (black arrow) with the right hand. Now pull with right and left hands in clockwise direction. You should be able to pull it slightly. Be sure to check the fittings on the tank too!

Preparation for dosing

1

Set the machine to pump by using the button [Fill/Pump]. Remember to check the pump direction. Use the button [Pump Up/Down].

2

Open the valve on the container.

Place a big container below the pump head.

Press [Start].

Pump until the air is out of the liquid.

Press the button [Fill/Pump] to change from pump to fill.

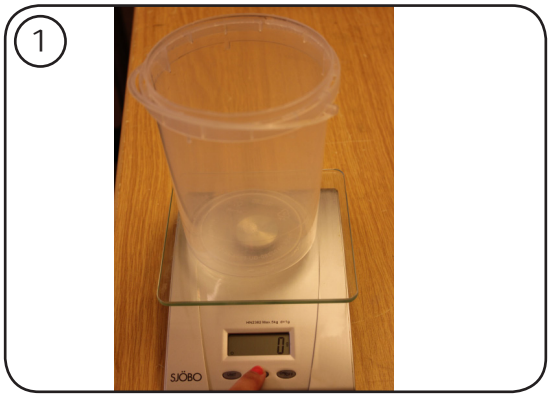
When the machine has stopped dripping, mount the cutoff mechanism. Can be mounted first but not with very viscous liquids. See page 16.

Choose the program that comes closest to the amount you want to dose. Use the button [Progr.].

Press the buttons [+] and [-] to find the wanted program. Press [Enter] to choose the program.

Press [+] and [-] if you want to change the dosing amount. Press [Enter] to save.

Calibration

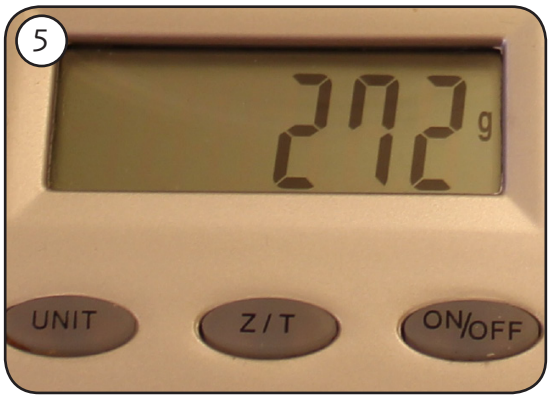


Put the container on a scale and press [TARE] to reset the scale.

Place the container under the pump head.

Press [Start] or press the foot switch.

Place the container onto the scale.



Read the amount on the scale.

Press [+] and/or [-] until the same number is on the display. Press [Calib] to save.

If the dosing amount differs from the real amount, it can be necessary to calibrate more than once.

The machine is now calibrated and ready.

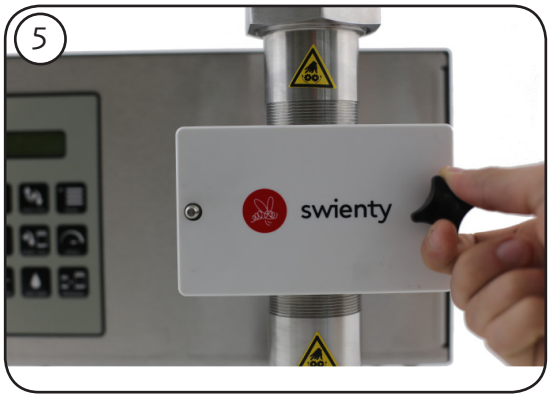
Cleaning

Start the machine to get the liquid out of the container and the hose.

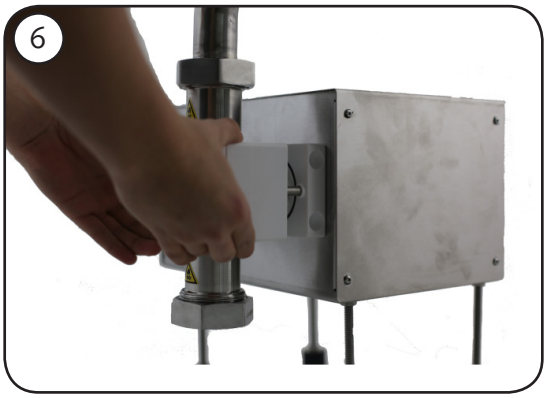
Loosen the valve on top of the pump head to bring in some air. Only loosen it a little so the liquid does not run out.
Warning: Always unplug the machine before the pump case is dismantled.

Remove the fitting on top.

It might be necessary to place it in a container in case it drips.



Screw the black nuts off the pump head.



Pull the pump head off by grapping onto the sides and pull towards you.

Go to rinsing station.

Remove the fitting below (Nut for BS fitting).

Remove the cutoff mechanism.

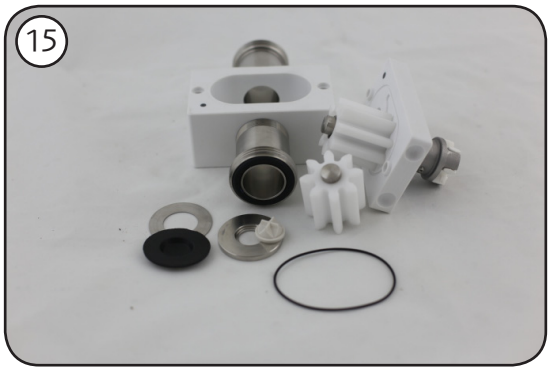
Rinse water through the pump head by turning the clutch. This makes it easier to open the pump head.

Open the pump head.

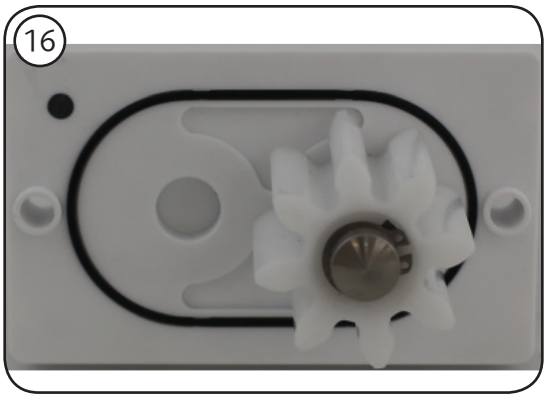
Remove the cog and the axis that is still in the pump head. It can be necessary to rinse with water to loosen it.

Remove the big, black O ring.

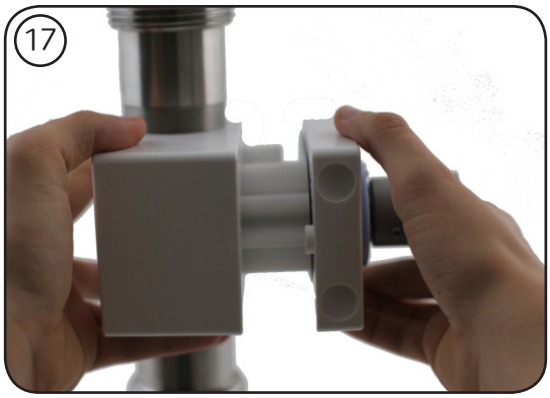
Push slowly on the axis on the cover until a hole appears between the axis and the cover. Rinse here.



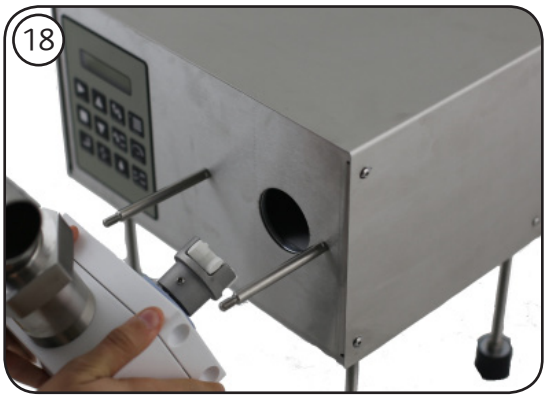
The pump case is to be cleaned by washing it in a dishwasher (normal program) or by washing it by hand in warm water and detergent.



Tip: Put some of the liquid or honey on the O ring to seal the pump head better.



Reassemble the pump head.



Remember to check that the clutch fits with the machine. Otherwise you cannot place the pump head right.

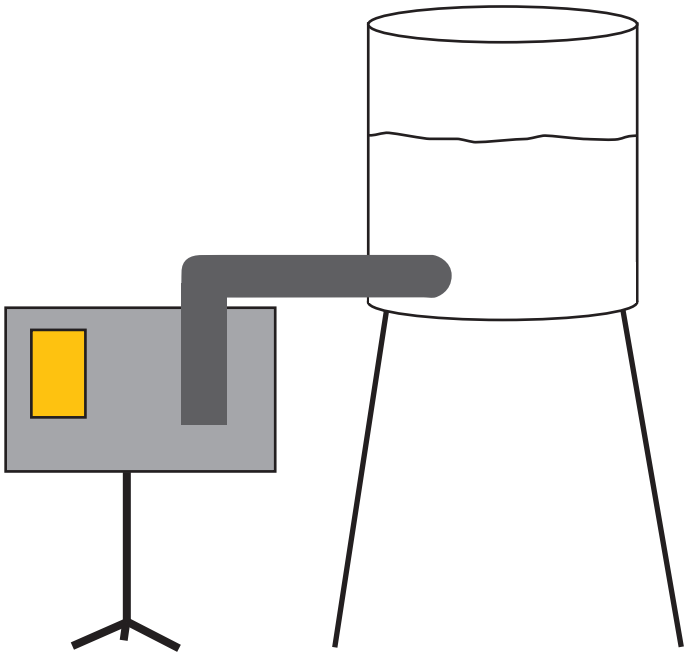
Possible konfigurations

Best

- Optimal speed
- Most accurate

- Possibility for more dripping

- for antidrip mounting see page 16

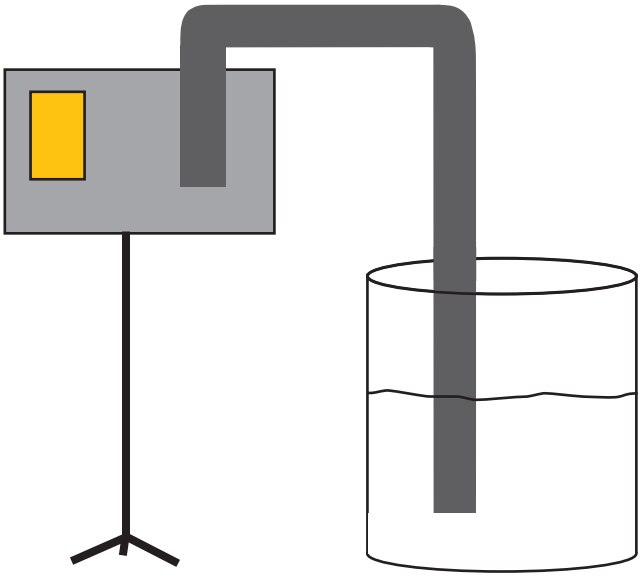


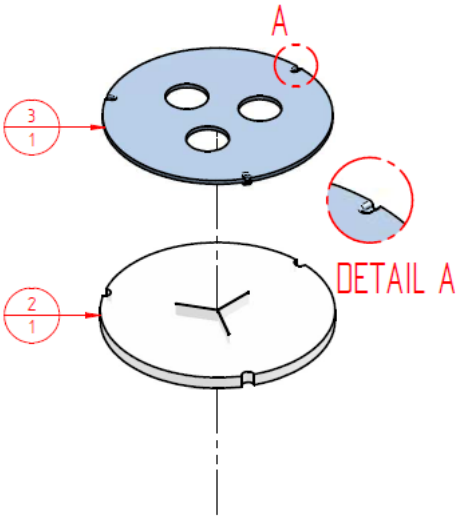
If you are using solid pipework, install a piece of flexible hose between the container and filling machine to avoid vibrations and unnecessary strain on the pump housing.

Also possible

- Less accurate
- Needs another cutoff

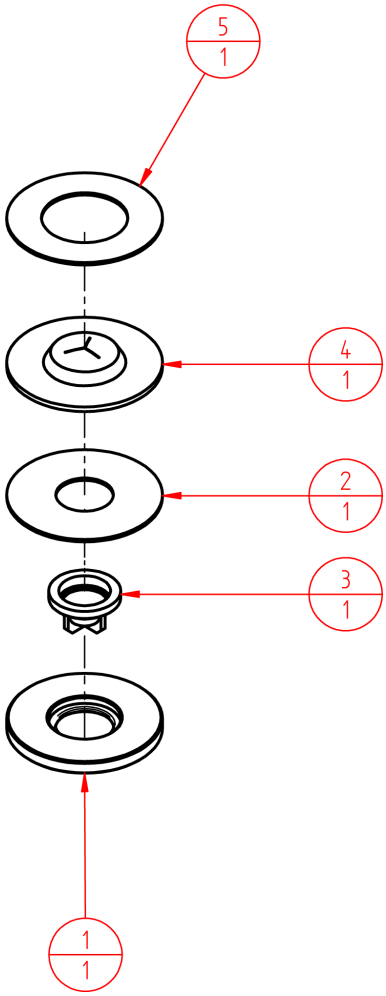
- for antidrip mounting see page 16





Antidrip mounting

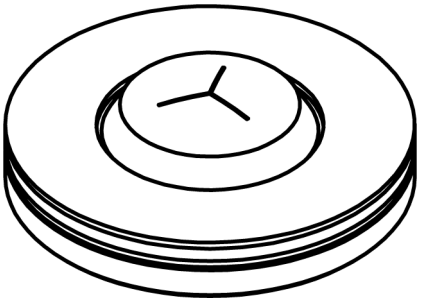
Rubber sealer with nozzle



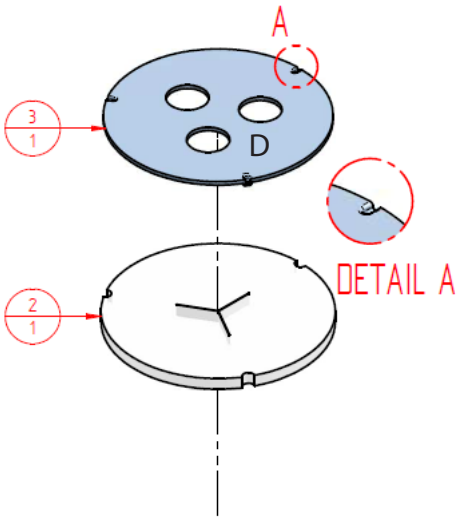
This newly invented rubber lock secures a fast and faultless cutting of the stream also with very viscous fluids, which prevents dripping.
The rubber lock is inserted as illustrated. The swelling of the lock has to face upwards.
It is very important that the components are mounted in the correct order.

Item Number	Title	Quantity	Order Nr.
1	Front matix f/ ø20 Crossvalve	1	60750309r1
2	Back disk f/ ø20 Crossvalve	1	60750315hb
3	Φ 20 Crossvalve	1	1100650
4	Antidrip	1	110072
5	Top and Button washer	1	60040825hb

Nozzles for other uses and fluids can be supplied.
Ask your dealer for advice or contact the manufacturer.



Silicone sealer



Standard equipement (not included)

When the fluid container is lower than the pump use three hole disc (d).
This works together with the silicone rubber as a non-return valve to prevent the fluid from flowing back into the tank.
When assembling, make sure the slots in the silicone washer are between and not in line with the holes in the three hole washer.

The Menu

With the aid of the [menu] button you can modify a number af parameters which are not very frequently used. If you push this button, "Parameters" will blink on the display. By pushing the [+]/[-] button you can set up "LOG", "LANGUAGE" and "RESET" (see Action Chart).

Parameter

With this function you can set up various data for the filling machine and its 10 programs.
As soon as you press [Enter], P(0-9) will occur on the display. The program number which has been used last time blinks. If you want to switch to another program, use [+] or [-].

TP
indicates the duration of the break between two fillings. When setting up TP you can select within a range of 0,0s and 9,9s with steps of 0,1s.

In case you are using a foot switch when filling, you can set up the TP in such way that you have enougt time to detach the filled glas and to attach the next glas. You can let your foot stay on the pedal. But as soon as you move it, you will have to reactivate the pedal again.

When coupling the machine with a turntable, TP should be reset to 0.

TM
is the time before the the engine turns N impulses back to avoid dripping.
TM is set to be 0,25 s. Normally, it is not necessary to change this.

N
is the number of impulses, the motor turns back in order to avoid dripping. N can be modified within a range of 0 to 100 impulses. The number for N is normally read directely when pushing **[antidrip]**.

TD
is the time between a pumping proces stops and the electronics send a ready signal to ex. turntable.
TD can be modified within a range of 0 to 10 sec.

Unit
You can set up 3 different units. You have the choice between g, oz and ml.

Speed
You can modify the speed of the motor and in that way the pump capacity with the aid of the speed button. You can select a speed between 10% and 100%, modification is made in steps of 5%. But normally you would set up the speed directly with the button **[speed]** on the keyboard.

Calibration
The calibration of the filling is normally made by pushing the button **[calib]**. The calibration results in a calibration factor which can be seen here.
Swienty recommend that you do not change it here, but instead changes it by using the button **[calib]**.

These data are valide for one program. To switch to another program, press **[stop]**. If you wish to quit the menu program, press **[stop]** two times (see Action chart).

LOG

[menu], Parameter, [+], LOG (blinks). Press [Enter] to enter the menu.
This MENU-option indicates how many kg, hours, units the machine has accomplished. The data cannot be modified with the aid of this MENU-option.

Language

[menu], Parameter, [+], LOG, [+] Language (blinks). Press [Enter] to enter the menu. Choose your language, then press **[Enter]** and **[STOP]**.

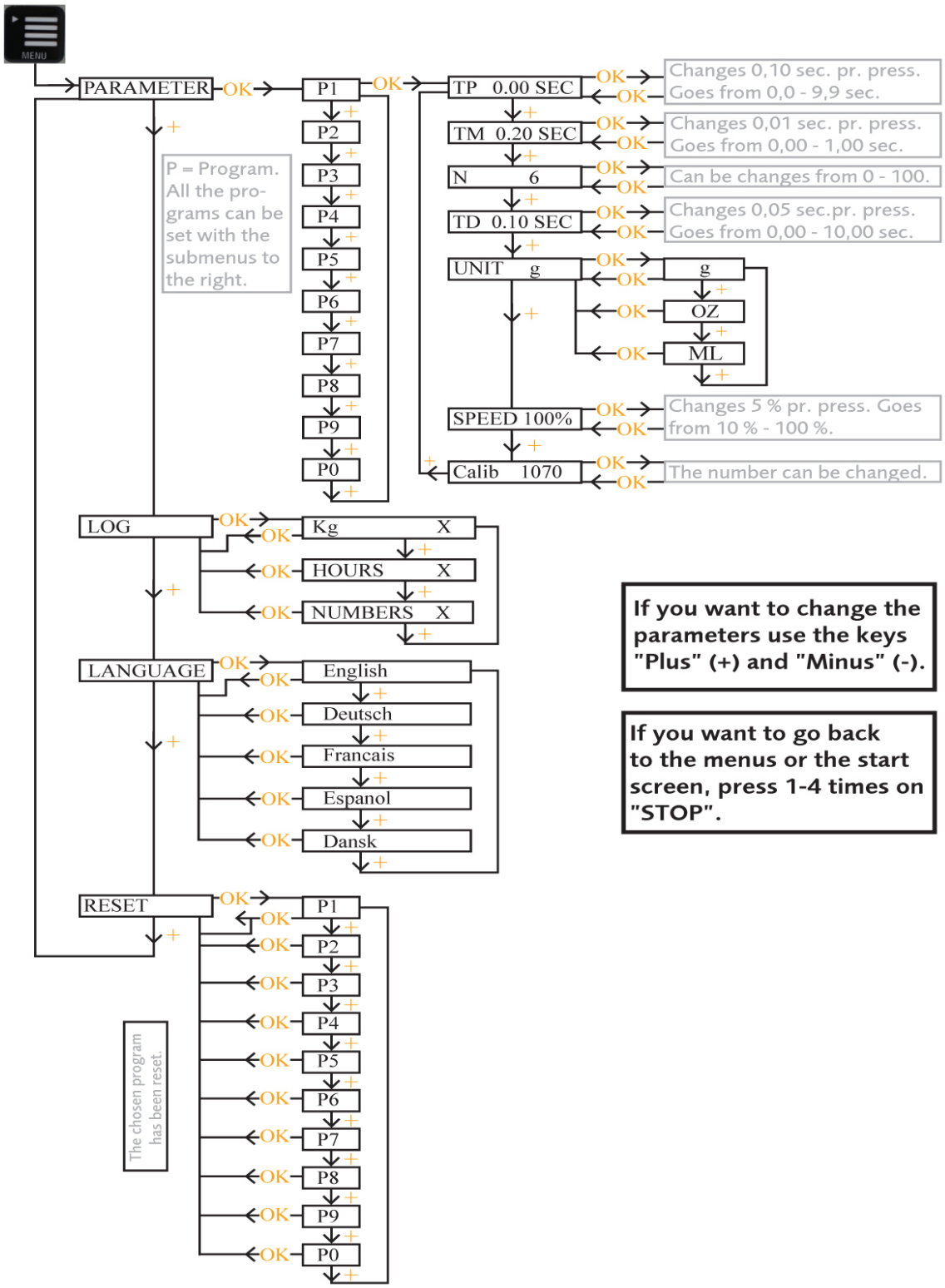
You can select between five languages: English, german, french, spanish and danish. All information on the display will be indicated in the language you have chosen.

RESET

With this option you can reset the data you modified one program at a time, to the default data provided by the manufacturer.

[menu], Parameter, [+] Log, [+] Language, [+], RESET (blinks), Press [Enter] to choose, Now P1 (or another program) is blinking. If you press [Enter] again the chosen program is resetting and the original data will be restored. To quit this option and get back to the menu press [stop] two times.

Functional Diagram



Programming default values

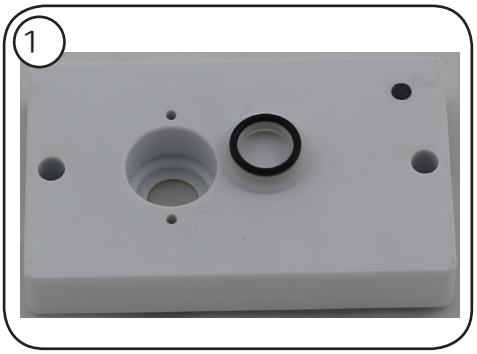
Program Nr.	Quantity	TP	TM	N	TD	Unit	Speed%	Calibration-factor
P1	100	0,0	0,25	6	0,1	g	100	1070
P2	200	0,0	0,25	6	0,1	g	100	1070
P3	300	0,0	0,25	6	0,1	g	100	1070
P4	400	0,0	0,25	6	0,1	g	100	1070
P5	500	0,0	0,25	6	0,1	g	100	1070
P6	600	0,0	0,25	6	0,1	g	100	1070
P7	700	0,0	0,25	6	0,1	g	100	1070
P8	800	0,0	0,25	6	0,1	g	100	1070
P9	900	0,0	0,25	6	0,1	g	100	1070
P0	1000	0,0	0,25	6	0,1	g	100	1070

Maintenance

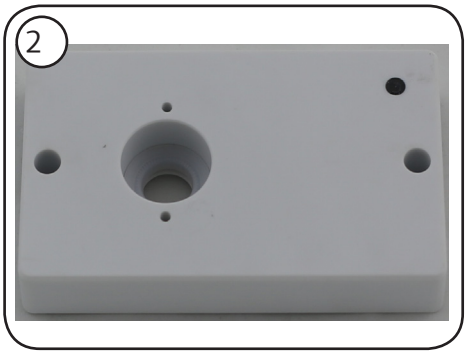
Apart from cleaning of the pump head the unit is maintenance free.

Attension: The pump must never run dry for more than a short periode of time, other wise it will dry out and melt.

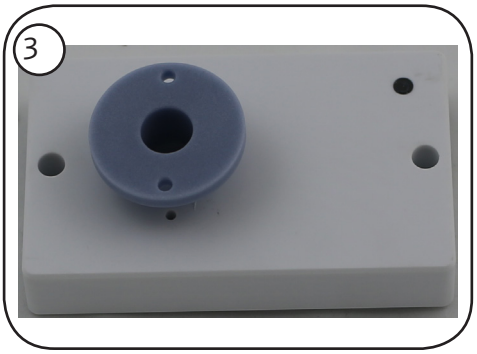
How to install a new seal



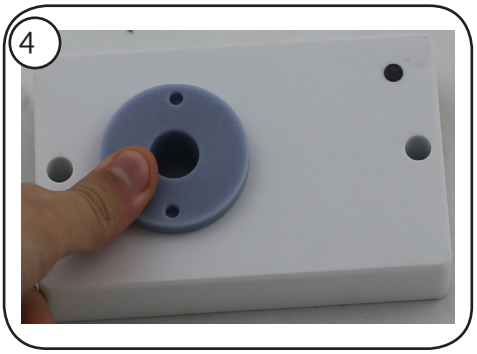
Take the old seal out



Place the new seal with the opening down softly into the opening

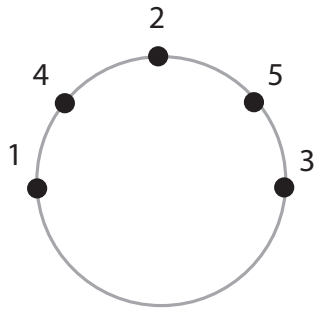


Place the blue plastic part on top of the seal

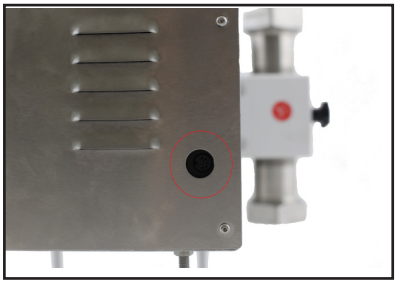


Push the seal in place by pressing the blue part down

Plug socket connections



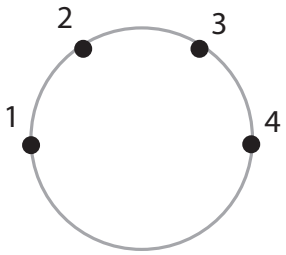
5 pin socket mounted on the left side of the machine.



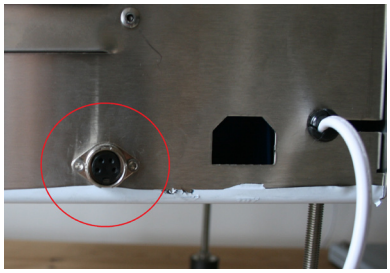
This connector can be found on the left side of the filling machine and is used by the signal cable for the turntable and mechanical sensor (foot pedal, micro switch). If you are using a turntable and a sesnor, connect it with the orange 3-pole connector from the turntable.

1. +5 V
2. Start
3. 0 V, Earth
4. Stop
5. Ready signal for turntable

The Start/Stop signal must be "active low" They can beperated by a contact or an NPN unit. The ready signal is an NPN active low-signal.



4-pin connector mounted on the back of the machine.



This connector is used for supplying an optional turntable with power and can be found on the backside of the filling machine.

1. +24 V DC
2. NC
3. NC
4. 0 V, Ground

Fittings and extra parts

Fittings

Rubber lock
110072

Disc
110071

Suctionplate
Reflow-stop
110069

Diaphragm
silicone
110060

Disc with
3 holes
110070

Dosing
Syringe
115815

Nut for BS
fitting
BS 1 1/2
500110F

Mupuseal
v/sealring
110073

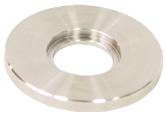
Nuts for pump
head
502740

O Ring for pump
head
508082

Foot pedal
110075

Rubberfeet
110058

Crossvalve
Ø20
110065D



Front
Matix
60750309rl

Back
Disc
60750315hb

Extra parts

Filling nozzle
ø9mm
110062F

Filling nozzle
15mm
110063

Filling nozzle
ø8x30mm
110063a

Filling nozzle
ø5x15mm
110064

Filling nozzle
ø3x40mm
110068

11/2" Fitting
bent
110110

11/2-2"
Fitting bent
110130

11/2-2"
Fitting bent/
short 110131

2" Fitting
bent
110140a

11/2" Fitting
straight
110100

11/2-2"
Fitting
straight
110120

2" Fitting straight
110140

Stand height
adjustable
110055

Hopper 10 liter*
110640

Hopper 20 liter*
110645

Filling pipe
110080

Tablestand
110044

Quick female
11/2"
110149

Quick female
2"
110145

Quick male
11/2"
110148

Quick male
2"
110144

Quick-hose
11/2"
110147

Quick-hose
2"
110143

Ball valve
11/2"
110220

Ball valve 2"
110210

Double
hexnut 11/2"
110221

Double
hexnut 2"
110211

Butterfly
valve 11/2"
110230

Butterfly
valve 2"
110240

Hoseclamp
11/2"
110175

Hoseclamp
2"
110176

O-ring for
11/2 BS
500212

O-ring 2"
500127

Hose 11/2"
110160

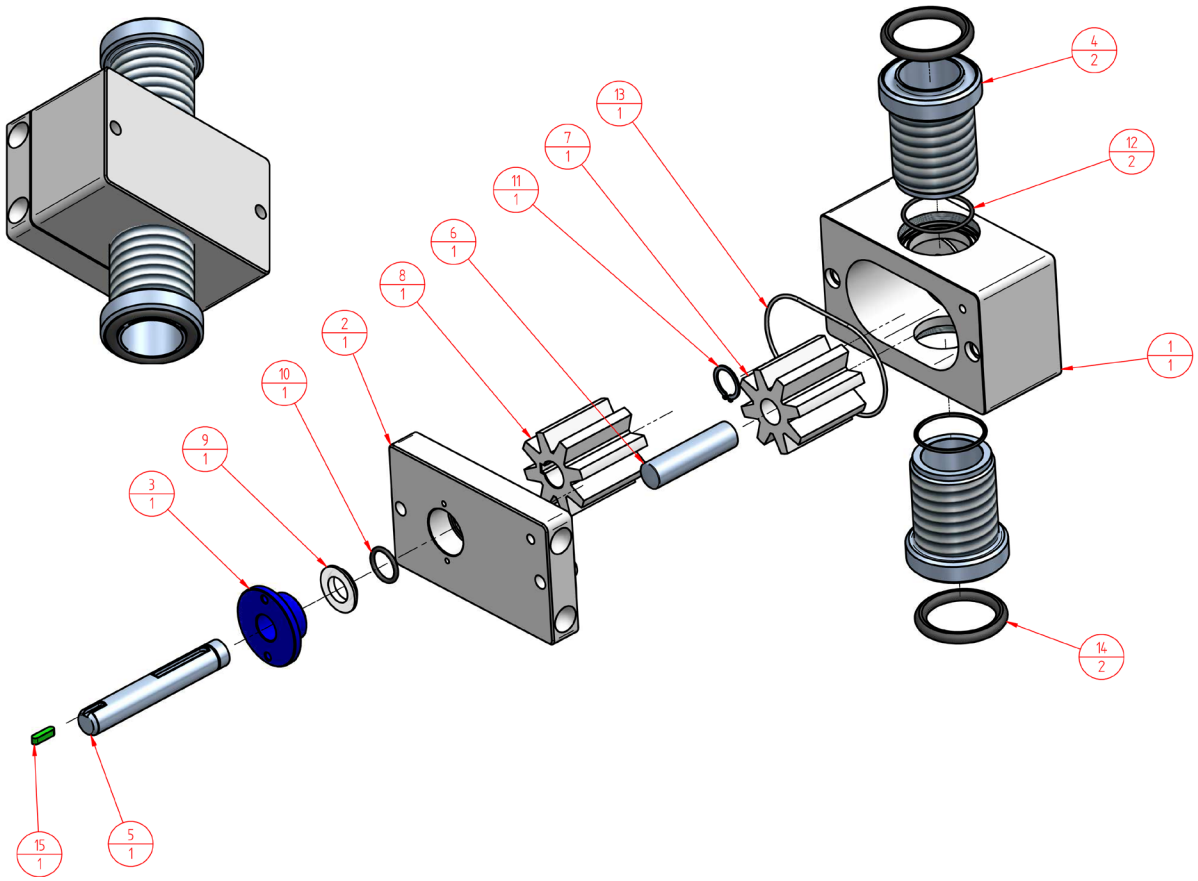
Hose 2"
110170

We have a variety of filling tanks and creamers.

Please contact us for more information. If we do not have the part you need for you filling station, we will produce them.

*Hoppers requires the use of 110044 tablestand for not to tip over

Exploded view



Item Number	Document Number	Revision number	Title	Material	Quantity
1	dt-054-010-1	09	Pumpehus		1
2	dt-054-011-1	06	Pumpedæksel		1
3	dt-004-015	00	Mupu holder		1
4	dt-004-010A	00	Studs		2
5	dt-054-007	00	Driv aksel		1
6	dt-004-009	00	Medløbs aksel		1
7	Friløb	00	Tandhjul ø51,5x52 Modul 5 8-DC-41,5	Con nr. 60543015F	1
8	Trækhjul	00	Tandhjul ø51,5x52 Modul 5 8 DC-41,5	Con nr. 60543015F	1
9			Mupuseal 30312-0160-90-s	Con nr. 508201	1
10			Oring 17,3x2,4	Con nr. 508017	1
11			Låsering ø16 A2	Con nr. 502801	1
12			Oring ø37x2	Con nr. 508037	2
13			Oring ø82x2	Con nr. 508082	1
14			Oring BS 1.5	Con nr. 500212	2
15			Pasfjeder syrefast 4x4x16	Con nr. 502703	1

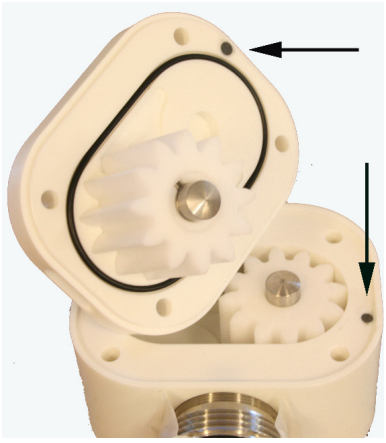
FAQ

Common issues

Problem:	**Cause and/or Solution:**
THE MACHINE DOES NOT RUN:	1. Is the machine connected to a power source? 2. Are there any lights in the display.
THE WEIGHT DEVIATES FROM CURRENT FILLING WEIGHT	Calibrate the machine.
AIR IN THE HONEY:	1. Is the Flow optimal and unobstructed/clogged? 2. Check to see if the sucktionhose is intact. 3. Check to see if the pump casing is securely tightened. 4. Remove the pump casing by loosening the 4 nuts and check to see if the O Ring between the casing and the cap is intact. 5. Remove the stubs and check to see if the interior O-ring is intact. 6. Remove the light blue bushings in the pump casing and check to see if the mupuseal (sealing ring) is intact.
THE MACHINE MAKES FUNNY NOISES:	Lower the N-value under Anti drip.
THE MACHINE DOES NOT PUMP BUT SUCKS AND SPLUTTERS:	Reverse the pumping direction on the display.
DISPLAY DOES NOT COUNT AFTER START UP:	Flawed programming. Reset the machine by entering [MENU] and go into RESET.
DISPLAY SHOWS "ERROR TEMPERATUR":	The engine is overloaded. The liquid is very viscous and the speed is too high. Let the machine cool off or contact Swienty.
DISPLAY SHOWS "MOTOR OVERLOAD"	1. The pump head is mechanical blocked. Open the pump head to remove. 2. The voltage is to high.

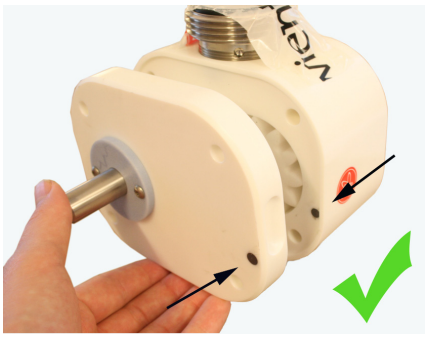
DISPLAY SHOWS "ERROR PUMP"

The pump is not mounted properly.



Notice that the two magnets should be mounted directly on top of each other.

Warning: Always unplug the machine before the pump case is dismantled.



Correct mounting!

The machine's magnetic field against which, the magnets are to be placed.

Conversion Table

1ml (Honey) = 1,44 g (Honey)
1ml (Honey) = 0,051 oz (Honey)

1 g (Honey) = 0,7 ml (Honey)
1 g (Honey) = 0,035 oz (Honey)

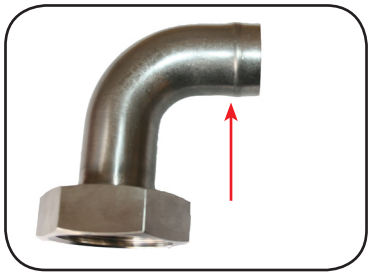
1 oz (Honey) = 19,73 ml (Honey)
1 oz (Honey) = 28,35 g (Honey)

If you find mistakes or have suggestions for improvement please contact us at:

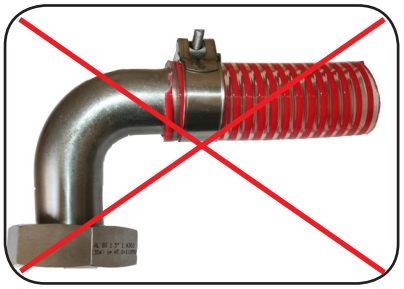
www.swientyfilling.com
shop@swienty.com
Fax: +45 74 48 80 01

Air in the honey

Assembly between hose and hose connector

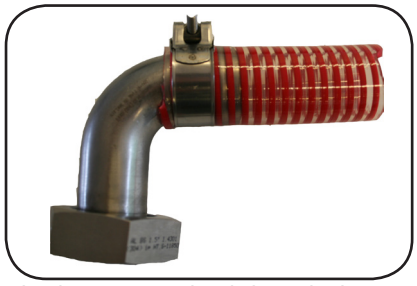


It is very important to be sure the hose has been pushed over the protuberance(Arrow) and the clamp just so.



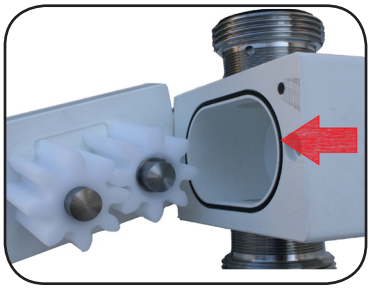
Her is how the hose is not to be installed. The clamp is mounted on the outside of the protube-rance and the hose has not been push long enough over the hose connector.

This picture shows the correct position to tighten the clamp.



The hose is pushed the whole way to whe-re the bending actually begins. Remember the clamp! The clamp is tightened at the same position as last picture. A small tip to easy the mounting of the hose to the hose connector is to heat it up with some hot water. Just leave it in the water for half a minute. Be sure to check tank side too.

Sealing in pump house



Check out for any defects in the sealing or if the aligning is correct.

Be sure the finger screws are tight and take care to do it equally so the house is perfectly aligning all the way around.

Quick Start

Starts the filling or pumping.

Indicates the direction of the pump (up or down).

Activates the program choice.

Increases a value or shows the next submenu in the chosen menu.

Stops the engine and interrupts the filling or pumping. Is also working as a return button.

Shows the speed of the engine in relation to max speed.

Changes between filling and pumping.

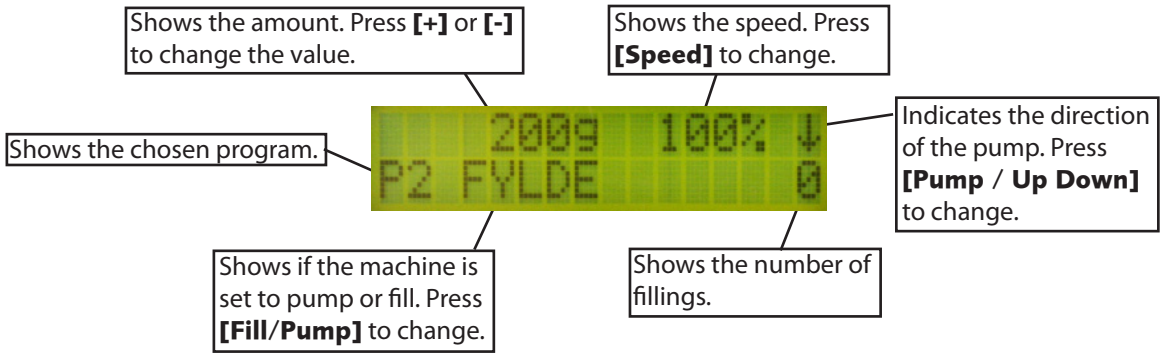
Decreases a value or shows the previous submenu in the chosen menu.

Activates the calibration process for the amount that is set.

Prevents the machine from dripping.

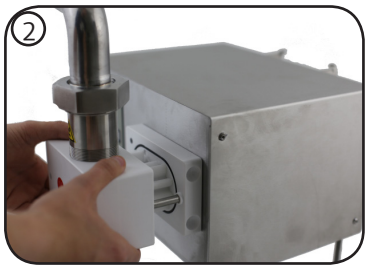
Opens up for new settings and values.

Chooses the value and saves the chosen value.



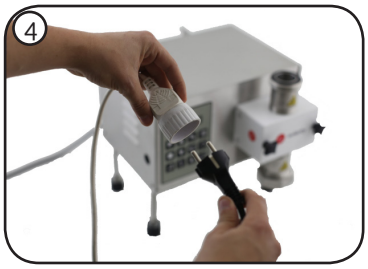
Installation

Clean the pump head

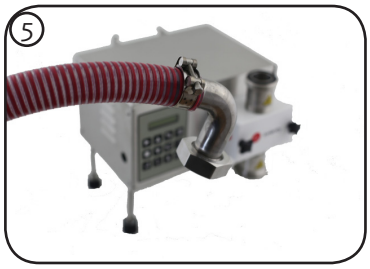


Mount the pump head

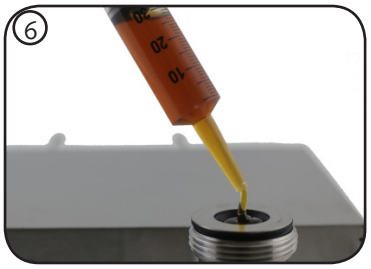
Connect footpedal



Connect power cord



Mount the hose



Put about 50ml medium into the pump head

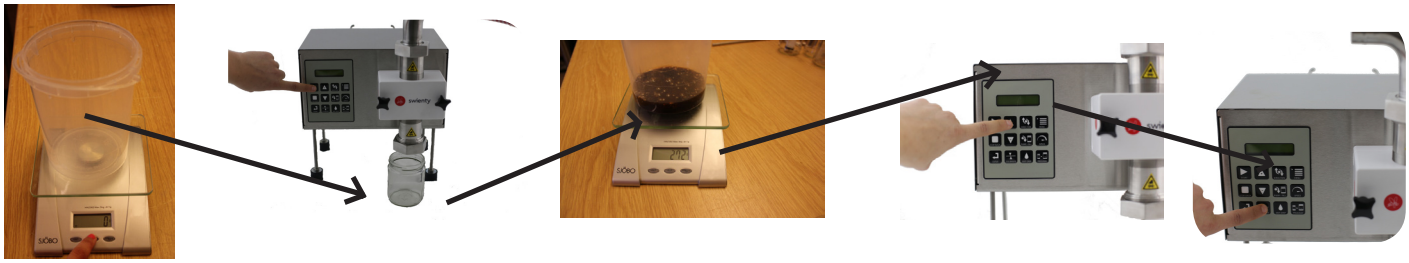
Mount the fitting onto the pump head and the hose to your tank. Pump with the pump until there is no air inside the hose

NB! Before use, plase make sure that the machine is mounted on a stable surface.

Set the filling weight

Your filling machine has 10 programmable weights it can remember. Choose a program by pushing the button **[Progr.]**. Ex: P1 is now flashing in the display. Push **[+]** or **[-]** to choose the program you want to use. Press **[Enter]** to choose the program. If you want to adjust the amount to be filled within this program press the buttons **[+]** or **[-]** to adjust this amount and **[Enter]** to save it.

Calibration



TARE = 0g [START] e.g. 272g +/- (Display = 272g) [CALIB]

Example: You want to fill 250g. Place your packaging on a scale and press **[TARE]**. Take the packaging under the pump and press **[Start]**. Take your packaging back to the scale and read the weight (here e.g. 272g). Transfer this value by pressing **[+]** to the machine until the display shows 272g and press **[CALIB]**. The machine will switch back to 250g in the display and is now calibrated.

Anti drip

Anti drip prevents the machine from dripping or pumping air, by turning the pump backwards. If the machine is dripping, you press **[Antidrip]** and **[+]** to increase the backwards pumping and then press **[Enter]**. If the machine makes loud noises just before you dose, it pumps air which has been sucked inwards after the last dosing. Press **[Antidrip]** and **[-]** to decrease the backwards pumping and then press **[Enter]**. Normally the ANTIDRIP value is set between 2 and 12 if you are dosing e.g. honey. The more viscous your liquid the higher the value.

Speed regulation of the motor

There are various applications for which it is necessary to be able to regulate the pumping capacity and consequently the speed of the motor. Push the **[Speed]** button. The speed indication blinks. By pushing the **[+]**/**[-]** buttons you can set up the percental speed you desire. Confirm with **[Enter]**. The setting up is made in intervals of 5%.
The speed regulation can also be carried out while you are filling or pumping.

Pumping

If you wish to use the machine as a pump, push the **[Fill/Pump]** button. If you want to change the direction, press **[Pump/u-d]**. The arrow on the display now points into the other direction. Now press start **[Start]**. The filling line starts at 0 and than counts upwards. To stop the pump, press **[Stop]**. The pumped amount is blinking on the display.
If you wish to continue pumping, press **[Start]** and the amount continues to count.
As soon as you want to start over again, press **[Stop]** again, afterwards **[Start]**.