# P12 Corker

Addendum: Setup and Maintenance

- Read this addendum and the MEP manual carefully before operating the corker.
- *One person should be assigned to maintain the corker. Only this primary operator should make adjustments to the corker. This primary operator should train additinal operators. However, adjustments should be made by, or under the careful supervision of the primary operator.*

**Setup of the Corker**

The corker has been setup and tested at St. Patrick's of Texas prior to delivery.

The final adjustments, *and the only adjustments*, needed are

1. Bottle Height Adjustment
2. Bottle Diameter Adjustment
3. Cork Depth Adustment
4. Cork Length Adjustment (only if your cork is NOT 1-3/4" length)

*The first three adjustments must also be performed whenever you change bottles*. **Do NOT make any other adjustments to the corker.**


Fig. 1. Bottle Height---Top of bottle MUST be at this height or slightly higher.

**Disconnect air line from corker before making adjustments or performing maintenance.**

1. Bottle Height Adjustment: See Fig 1. This adjustment is the most critical and must be performed BEFORE the other adjustments. The top of the bottle MUST be at the indicated level (or slightly higher). The top of bottle must be 3/4" or less below the white cone. See Fig. 2. Disconnect air hose from corker. Loosen the jam nut below the white spacer. Hold the white spacer and turn the rod of the air cylinder. The P12 is supplied with a black spacer (tied to bottle platform in Fig. 2.) Replace the white spacer with the black spacer for taller bottles.
   *Please note: This adjustment is the most commonly overlooked*. In particular, clients forget to make this adjustment when they change bottles.
2. Bottle Diameter Adjustment: See Fig. 2. The back support on the bottle stand should be positioned to center the bottle with the center of the white cone (below the jaws). The white cone will center the bottle, so this does not need to be precise---within 1/4" of center is sufficient.

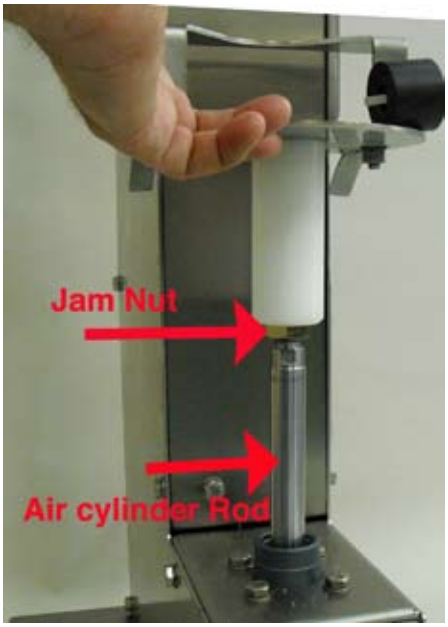



Fig. 2. Raise or lower bottle stand. Adjust Back Support to match Bottle Diameter. Note short spacer tied to the platform. Short spacer for ~13.5 to 15" bottles. Long spacer for ~11"-12". [Extra long spacer (optional) available online for ~9-10" bottles.]

This manual and parts for Corkers are available online.

www.StPats.com
stpats@stpats.com

St. Patrick's of Texas

Fig. 3. Adjust Cork Descent Tube if Cork Length is NOT 1-3/4”

3. Cork Length Adjustment: The corker has been setup for 45 mm (1-3/4”) cork length. You need to perform this adjustment ONLY if you are using 2” cork. See Figure 3. Note the gap between the top of the cork and the cork descent tube. Position the cork descent tube such that this gap is about 3/8”. Do not open the snapper plastic clamp. Simply twist and push upward on the cork descent tube (while pushing down on the snapper plastic clamp).
4. Cork Depth Adjustment: Make this adjustment AFTER the Bottle Height Adjustment. The Bottle Height MUST be correct in order to properly make this adjustment. Raise and lower the cork pushing pin (Fig. 4) to adjust the depth of the cork in the bottle.

Fig. 4. Adjust Cork Pushing Pin to change depth of cork in bottle. **ONLY MAKE THIS ADJUSTMENT AFTER BOTTLE HEIGHT ADJUSTMENT.**

**Periodic Maintenance**

1. Keep Top Plate clean. See Fig. 5. Wipe the top plate with clean damp cloth daily or as needed to keep cork dust to minimum. Windex or mild soap solution works well. .
2. Grease Jaws periodically. **Be sure air line is disconnected.** Apply food grade grease to the jaws through opening in top plate. Simply dab with finger. Run unit several times without cork. Now, run several cork thru corker to remove excess grease. Also, apply small dab of grease between cork pusher and post.
3. Lubricate moving parts annually. See Fig. 6. Remove back cover. Lubricate the rail. Aerosol spray of lithium grease works well.

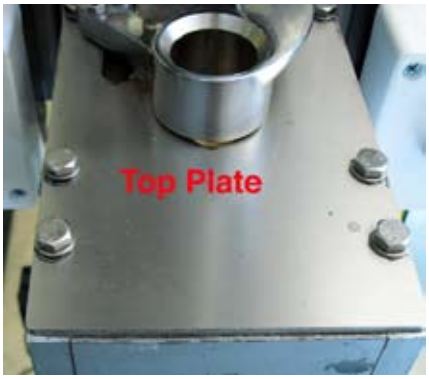



FIG. 5. Keep Top Plate clean.

Fig. 6. Back of corker. Lubricate rail annually.

**DO NOT**

1. DO NOT use OZONE to clean a corker. Ozone will destroy all rubber and plastic components and should NEVER be used on equipment with rubber or plastic components.
2. DO NOT use a HOSE or PRESSURE WASHER to clean a corker. Simply wipe down with clean damp cloth. Pressure washers should NEVER be used on equipment with bearings or pneumatic cylinders.
3. DO NOT use METABISULFITE (or any harsh chemicals) for cleaning or sanitizing. Metabisulfite is not a sanitizer nor a cleaner and should NEVER be used as such. Metabisulfite is corrosive to most metals including stainless steel.
4. DO NOT remove the jaws or make any adjustments to the corker except those on the previous pages. Contact St. Patrick's in advance if you believe some other adjustment needs to be performed.

**Problems and Solutions**

Problem: Nothing  happens when you push the start buttons.
Solution 1:  Be sure air line is connected. Set pressure to 5-6 bar. Be sure the compressor is set >100 psi.
Solution 2. Interlock is open. Clear safety shield must be in place to activate the interlock.

Problem: Cork not pushed into bottle far enough.
Solution 1: BOTTLE HEIGHT IS TOO LOW.  This is the most often misdiagnosed problem. Be certain the BOTTLE HEIGHT IS CORRECT, THEN AND ONLY THEN ADJUST THE CORK PUSHING PIN.
Solution 2. Cork pushing pin is too high.

Problem: Cork does not come down the cork descent tube.
Solution 1:  Small spring (Tap0008) inside hopper is broken. Replace spring. (available online).
Solution 2: See Fig. 7. Large spring (Tap0005) that drives the hopper shaft is broken (located underneath the metal cover on left side of corker.) Available online.  Attention: When you replace the spring, be sure the end of spring is not be pulled into the cogs of the sprocket. Adjust chain such that the spring stops just before it reaches the sprocket.
Solution 3:  See Fig. 7. Check sprocket (pinion Tap0215) on hopper shaft. Remove chain from sprocket. Sprocket should rotate hopper shaft when turned counter-clockwise, but rotate freely in other direction (clockwise). (Sprocket is available online.)

Problem:  Corker initially operates fine but becomes sluggish during operation.
Solution: Drain water from your air compressor tank. Compressor tank should be drained daily. The cause of this problem is condensation of the water in a valve in the corker.


Fig. 7.  Assembly to drive the hopper shaft.
Top end of spring should not be pulled into the cogs of the sprocket (during downstroke of corker). Adjust chain such that the spring stops just before it reaches the sprocket.

# CONDITIONS OF SALE AND WARRANTY

1. Read carefully this operator's handbook before operating our corking machine P12.
2. M.E.P. guarantees his corking machine P12 in case of breakages caused by faulty components or incorrect assembly.
3. Our P12 corking machine has a 12-month warranty. 12 month period begins on shipping date from St. Patrick’s of Texas. This guarantee is valid only for the first owner of the corking machine.
4. Warranty only consists in replacing the damaged parts and it does include neither refunds for losses caused by the shutdown of the machine nor any cost of labour or any transport cost to send the filling machine to a repair shop.
5. Any repair or modification made to the machine by unauthorized personnel will make the warranty void.
6. We cannot be held responsible for damages due to incorrect use of the corking machine, or failure to carry out maintenance and lubrication, or problems or damage incurred during transport.
7. M.E.P. reserves the right to introduce changes without previous notice to the corking machine P12; however, the supply of spare parts of the previous models will be guaranteed.

# INDEX

# DESCRIPTION OF THE CORKING MACHINE P12

Our corking machine P12 meets the requirements of those wine-growers who need a good quality product at a reasonable price. This corking machine is a good alternative to the traditional manual ones, which are less accurate in the bottling operation and therefore might result in damaging the cork.

Our corking machine P12 is almost entirely made of stainless steel to make cleaning easier. Moreover all those parts which could come into contact with the corks are made of materials that do not react with the air (such as stainless steel, plexiglass, chromium-plated steel), in order to prevent all chances of polluting corks with rust splinters or whatever other substances bad for health. Even the internal mechanisms, such as connecting rods and levers, are galvanized.

The inner mechanisms subject to movements are supported by ball-recirculating elements, in order to guarantee a higher precision of functioning and a restrained wear.

All moving gears are protected by safety guards and those parts which the operator must reach often, such as the cork container and the jaws, are fitted up with easily removable safety guards. The latter are equipped with a sensor so that the corking machine cannot work when these guards are removed.

## SAFETY SYMBOLS:

General danger

Caution: refer to the operator's handbook


Caution: 230 volt tension.

Caution: rotating gears. Severing of fingers.

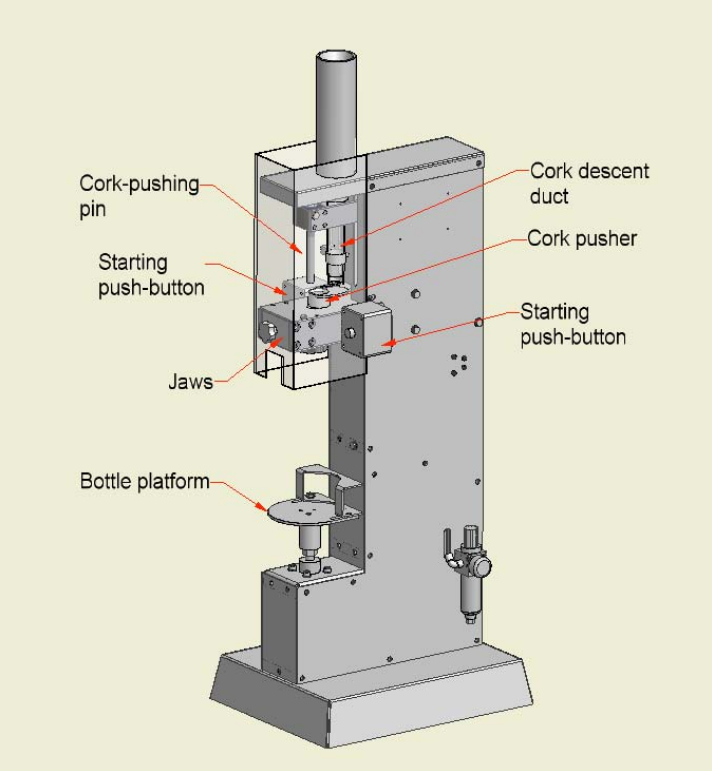
## OPERATING DIRECTIONS

Our corking machine P12 positions the cork within jaws which squeeze it down to the size of the neck of the bottle. In this way less stress is needed to push the cork down into the neck of the bottle with the advantage of not damaging the cork itself that will expand once it is inserted and ensure a good seal.

Corks must be manually pushed down the cork descent duct (see picture 1) which can hold 7-8 of them at a time.

To start the corking machine a bottle must be placed on the bottle platform, the two starting push-buttons must be kept pressed for a couple of seconds (see picture 1). Then the jaws go down and compress the cork which is afterwards inserted into the neck of the bottle.

At this point the two push-buttons can be released to start the cycle of return off. This means the raising of the jaws, the ascent of the cork-pushing pin and the rotation of the cork pusher which picks up a cork from the cork descent duct and drives it into the jaws, ready to be used next time.




**Picture 1.**

## TECHNICAL DETAILS

### Standard equipment:

- manual cork loading
- cork size diameter 22-26 x 50 mm.
- bottle height up to 390 mm.
- corking time approximately 3 seconds

### Optional equipment:

- cork descent duct and cork pusher for corks with diameter up to 28 mm.
- wheeled support model A (made of stainless steel)

- upper container for corks fitted up with a mixing device that lines the corks up and pushes them through the descent duct in the correct position for the corking to be carried out successfully (for corks with diameter up to 26 mm. and height up to 45 mm.).

**Corking machine P12**

Height: 1140 mm.

Width: 335 mm.

Length: 385 mm.

Weight: 48 kg.

**Corking machine P12 equipped with wheeled support and cork container**

Height: 1850 mm.

Width: 520 mm.

Length: 420 mm.

Weight: 72 kg.

**Pneumatic cylinder**

Advised feeding pressure: 4 - 4,5 bar

Feeding pressure for tough corks: 6-7 bar

Cylinder - 1: bore 50 mm.; stroke 150 mm.

Cylinder - 2: bore 80 mm.; stroke 125 mm.

Air consumption for each corking (4 bar): 8,77 NI

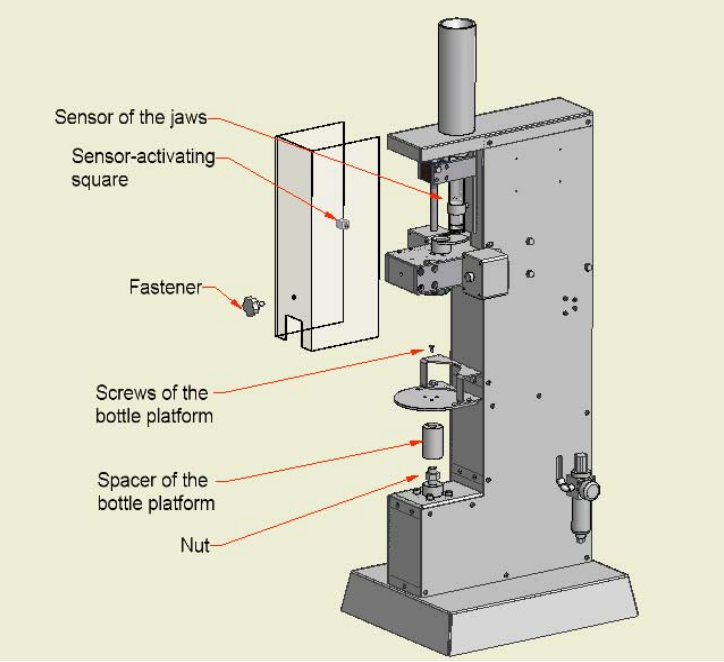
Air consumption for each corking (6 bar): 12,3 NI

# INSTRUCTIONS FOR USE

- Positioning. The corking machine P12 should be placed on a steady support in a lit up room.

In case the corking machine P12 is fitted up with a wheeled support, make sure it is placed on an even ground.

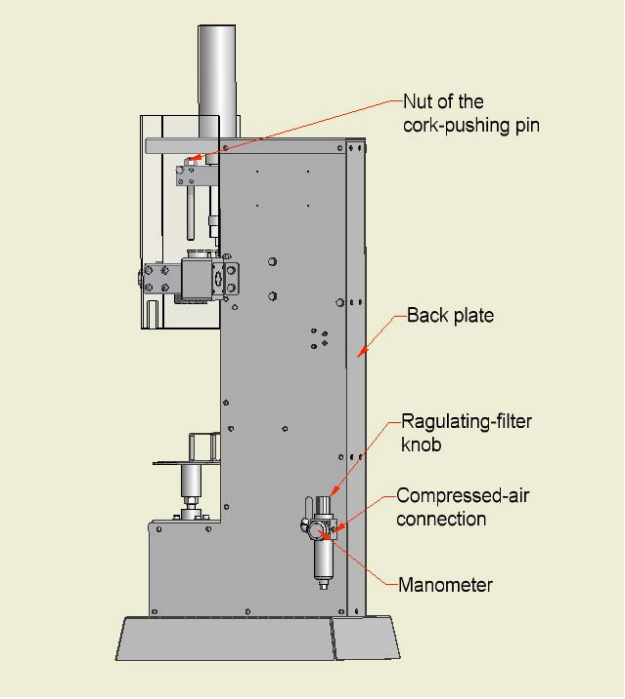
- Clean all the parts that come into contact with the corks, such as cork descent duct, cork pusher, jaws, cork-pushing pin and cork container.
- Take off the antiscratch light blue or white nylon film from the front plastic safety guard, tighten the fastener and make sure the brass sensor-activating square, which is screwed on the safety guard, can activate the sensor of the jaws (see picture 2).
- Check that the top of the bottle placed on the bottle-platform is not further than 4 or 5 cm. from the lower part of the bottle-guide cone (see picture 2); otherwise, change the spacer of the bottle-platform through the longer one supplied with the machine. To carry out this operation, undo the three screws with countersunk head located under the bottle-platform (see picture 2); then undo the spacer by holding tight the nut underneath. It should be noted that it is possible to obtain a precise height adjustment by screwing enough the spacer of the bottle-platform and then retightening its nut.
- Connect the corking machine to the compressed-air feeding using the connection (see picture 3). Set the air feeding at 4-4,5 bar using the knob of the regulating-filter and checking the pressure level on the manometer. The knob of the regulating-filter must be lifted up and turned clockwise or anticlockwise in order to increase or decrease the pressure level and then lowered once again at the end of the regulation.




**Picture 2.**

- Insert the corks down the descent duct.
- Now the corking machine is ready to be used and both the cork-pushing pin and the jaws should go up. Place a bottle on the bottle platform and the corking is carried out by keeping pressed the starting push-buttons for a couple of seconds.

- At the end of work disconnect the feeding so that the cylinder drains the air and the jaws go down.




**Picture 3.**

# FAULTS AND REMEDIES CHECK LIST

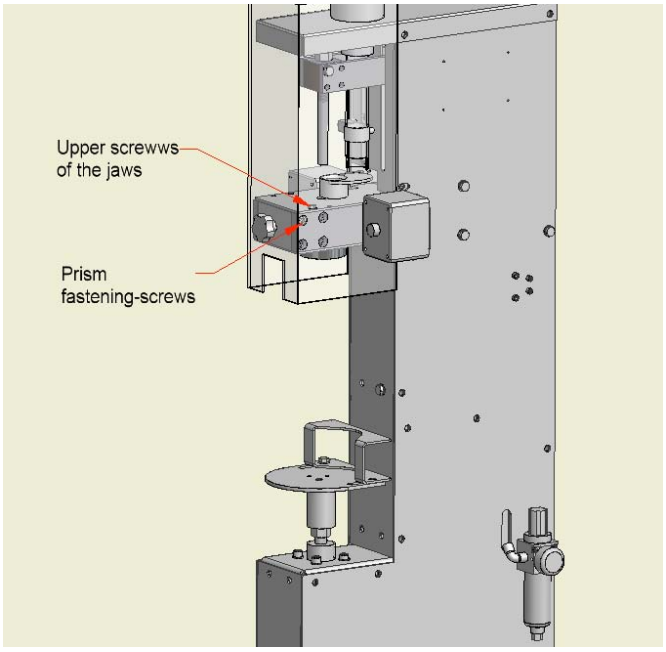
**IMPORTANT**

Before intervening on the machine always disconnect the air feeding and wait until the jaws go down.

- In case the corking machine does not start check that the fastener of the plastic safety guard is tightened in the correct way and the sensor-activating square can start properly the sensor of the jaws.
In case the corking machine still does not start, the back plate should be removed (see picture 3) in order to check that all the hoses are connected properly.
Anyway it is advisable not to go on trying too long and if the problem persists turn to the manifacturer.

- If it is needed the cork to be inserted deeper or higher in the neck of the bottle, the fastening nut (see picture 3) must be loosened and the cork-pushing pin turned: the last is threaded then it can be moved up and down.

- Our corking machine P12 is set to compress the corks up to a diameter to 16 mm.




**Picture 4.**

- In case the corks are not picked up precisely by the cork pusher, it is necessary to adjust the stroke of the cork pusher itself (the cork pusher is fastened to the jaws' upper plate) (see picture 4). To do this, the six upper screws of the jaws must be loosened and the upper plate of the jaws can be moved towards the corking machine or in the opposite direction.

- In the event of the corking machine vibrating, the front plate must be taken off and the slides lubricated with oil.

- In case the jaws do not easily reach the end of the cycle position (open position), it is advisable to drop some drops of oil inside them and let the machine do a couple of blank strokes. Before starting work it is better to clean the jaws to prevent the oil from dirting the corks.

**ATTENTION**

In the event of strong vibrations of the machine immediately release the starting push-buttons and contact the manifacturer.

# MAINTENANCE

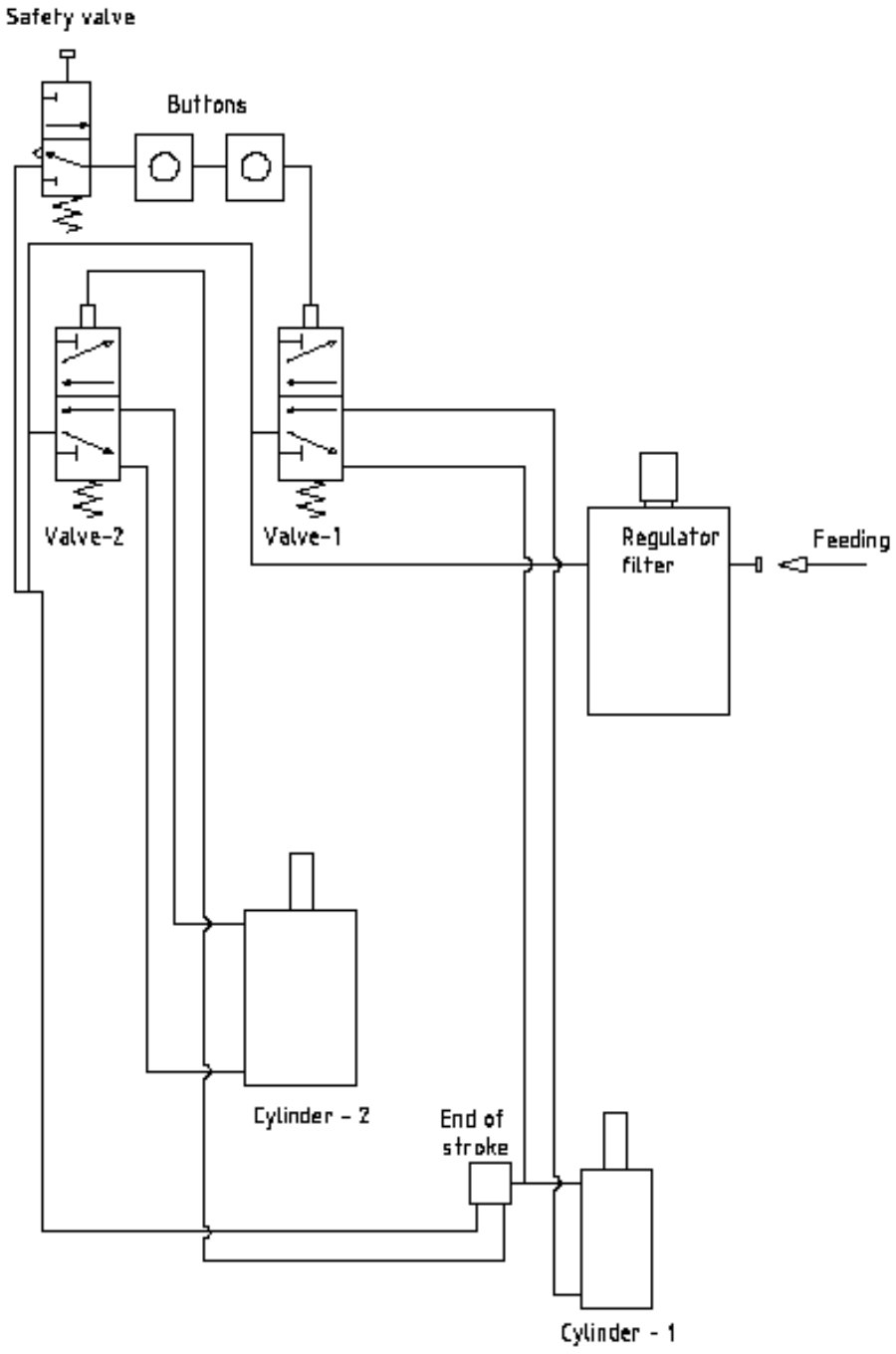
A long machine working life is dependent upon constant and methodical compliance with the following instructions:

- take off the front safety plate and lubricate the two slides;
- clean the jaws from any cork dust;
- lubricate the inside of the jaws and remove the excess oil before starting work.

At the end of each season we recommend to:

- carefully clean the machine and the jaws;
- store the machine in a dry place and cover it up with a cloth or a nylon film in order to prevent the dust from crusting over the corking machine.

# PNEUMATIC SYSTEM OF THE CORKING MACHINE P12



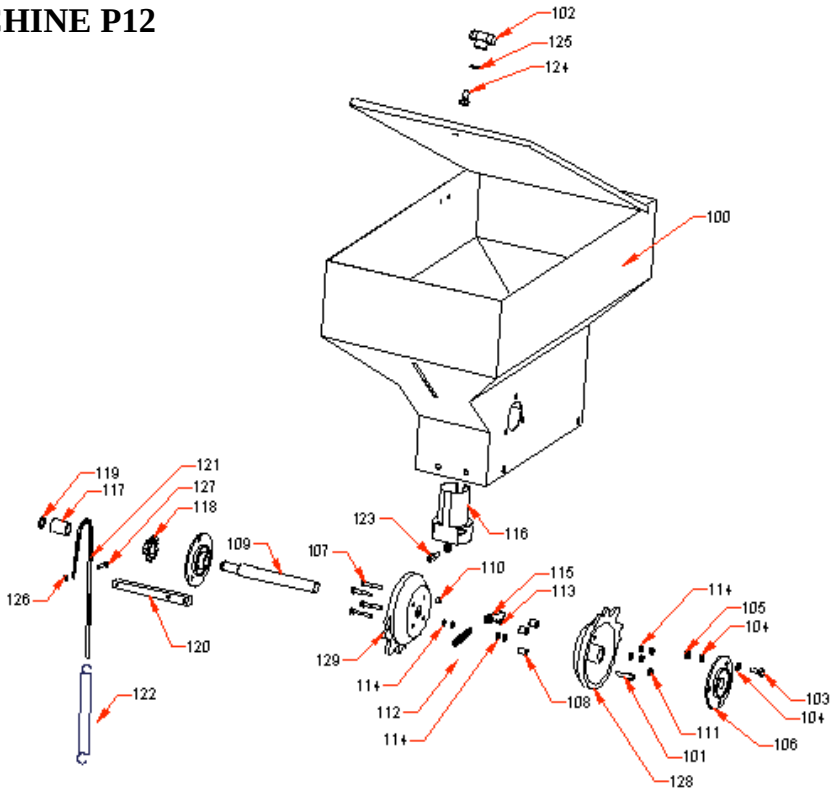
| POS. | DESCRIPTION | REF. |
|---|---|---|
| 1 | Lower support | Tap1644 |
| 2 | Threaded bushing | Tap1403 |
| 3 | Cylindrical head screw M10x20 | Tap0328 |
| 4 | Nut M20 | Tap0338 |
| 5 | Cylinder 50 mm - 150 mm | Tap0413 |
| 6 | Washer for screw M10 | Tap0307 |
| 7 | Screw M8x16 | Tap0302 |
| 8 | Washer for screw M8 | Tap0303 |
| 9 | Right side plate | Tap1630 |
| 10 | Cylinder 80 mm - 125 mm | Tap0414 |
| 11 | Curve 3/8 - hose 8 mm. | Tap0402 |
| 12 | Nut M50 | Tap0337 |
| 13 | Rod | Tap0517 |
| 14 | Nut M16 short | Tap0347 |
| 15 | 50 mm cylinder fastening-plate | Tap1646 |
| 16 | 80 mm cylinder fastening-plate | Tap1647 |
| 17 | Handgrip with screw M8x16 | Tap0208 |
| 18 | Screw M8x20 ZA | Tap0308 |
| 19 | Screw M8x16 ZA | Tap0348 |
| 20 | Platform | Tap0509 |
| 21 | Countersunk head screwM5x12 | Tap0333 |
| 22 | Nut M8 | Tap0306 |
| 23 | Reference for bottle | Tap0508 |
| 24 | Cylindrical head screw M5x55 | Tap0347 |
| 25 | Nut M4 | Tap0329 |
| 26 | Curve 1/8 - hose 8 mm. | Tap0403 |
| 27 | Curve 1/8 - hose 4 mm. | Tap0404 |
| 28 | T connection 1/8 - hose 8 mm. | Tap0405 |
| 29 | Adapter for hose 8 mm. - 4 mm. | Tap0406 |
| 30 | Valve 5/2 | Tap0407 |

| POS. | DESCRIPTION | REF. |
|---|---|---|
| 31 | Manometer | Tap0408 |
| 32 | Screw M4x45 | Tap0340 |
| 33 | Three-way connection - 4 mm | Tap0415 |
| 34 | Curve 1/4 - hose 8 mm. | Tap0410 |
| 35 | Regulating filter | Tap0411 |
| 36 | 80 mm Cylinder safety guard | Tap1649 |
| 37 | Connection | Tap1337 |
| 38 | Push-button | Tap0227 |
| 39 | Cylindrical head screw M4x20 | Tap0341 |
| 40 | Sensor | Tap0412 |
| 41 | Upper plate | Tap1638 |
| 42 | Cork-loading cone | Tap1656 |
| 43 | Chain protection cap | Tap1639 |
| 44 | Left side plate | Tap1631 |
| 45 | Back plate | Tap1635 |
| 46 | Slide | Tap0233 |
| 47 | Screw M8x30 ZA | Tap0348 |
| 48 | Cylindrical head screw M6x20 | Tap0312 |
| 49 | Curve 1/8 for 6 mm hose | Tap0416 |
| 50 | Moving part | Tap0234 |
| 51 | Connection | Tap1314 |
| 52 | Cylindrical head screw M8x16 | Tap0313 |
| 53 | End-of-stroke device | Tap0417 |
| 54 | Spacer 110x20 | Tap1036 |
| 55 | Pin side-plates | Tap1312 |
| 56 | Nut M5 | Tap0316 |
| 57 | Screw M5x30 | Tap0319 |
| 58 | Spring | Tap0007 |
| 59 | Nut M14 | Tap0349 |
| 60 | Elastic ring diameter 15 mm. | Tap0211 |

| POS. | DESCRIPTION | REF. |
|---|---|---|
| 61 | Pin diameter 15 mm. | Tap1023_1 |
| 62 | Side plate | Tap0706 |
| 63 | Bearing SKF 4302 | Tap0226 |
| 64 | Fork | Tap0702 |
| 65 | Bearing SKF 625-2Z | Tap0228 |
| 66 | Cylindrical head screw M5x20 | Tap0331 |
| 67 | Spacer | Tap0716 |
| 68 | Spring | Tap0004 |
| 69 | Plate | Tap0709 |
| 70 | Spring-angle bar | Tap0705 |
| 71 | Threaded angle bar | Tap0704 |
| 72 | Prism for jaws | Tap0701 |
| 73 | Plate | Tap0708 |
| 74 | Countersunk head screwM4x16 | Tap0325 |
| 75 | Cone | Tap0713 |

| POS. | DESCRIPTION | REF. |
|---|---|---|
| 76 | Washer for screw M6 | Tap0330 |
| 77 | Screw M6x12 | Tap0324 |
| 78 | | Tap1313 |
| 79 | Block | Tap0719 |
| 80 | Cork pusher | Tap0801 |
| 81 | Safety guard | Tap0721 |
| 82 | Connection | Tap0213 |
| 83 | Cork descent duct | Tap1213 |
| 84 | Upper plate | Tap1319 |
| 85 | Stainless steel pin | Tap1315 |
| 86 | Wedge | Tap1309 |

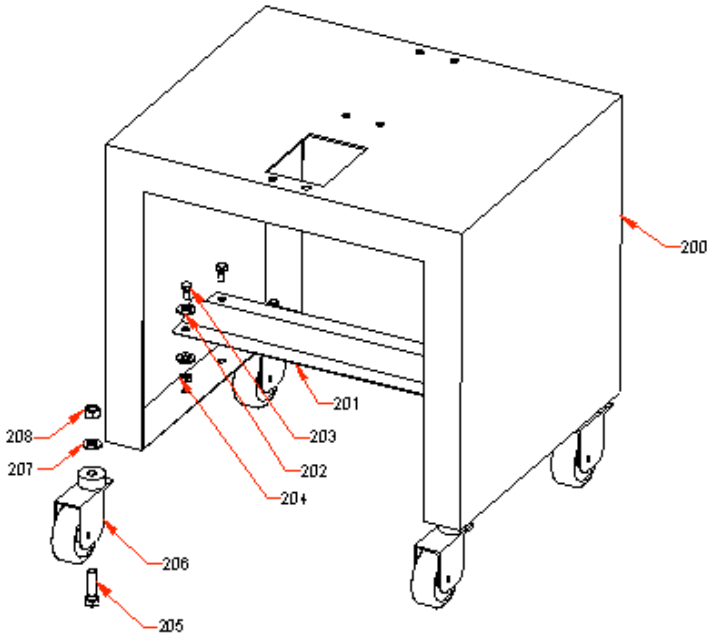
## CORK CONTAINER FOR CORKING MACHINE P12 (OPTIONAL)




| POS. | DESCRIPTION | REF. |
|---|---|---|
| 100 | Cork container | Tap1840 |
| 101 | Elastic pin 5x30 | Tap0224 |
| 102 | Threaded hand grip M8 | Tap0216 |
| 103 | Screw M6x16 | Tap0350 |
| 104 | Washer for screw M6 | Tap0330 |
| 105 | Nut M6 | Tap0321 |
| 106 | Bearing SBPF 203 | Tap0214 |
| 107 | Screw M5x30 | Tap0319 |
| 108 | Spacer for mixing device | Tap1212 |
| 109 | Shaft | Tap1657 |
| 110 | Screw M8x10 without head | Tap0317 |
| 111 | Nut M5 | Tap0316 |
| 112 | Spring for mixing device | Tap0008 |
| 113 | Contersunk head screw M4x6 | Tap0336 |
| 114 | Washer for screw M5 | Tap0343 |

| POS. | DESCRIPTION | REF. |
|---|---|---|
| 115 | Tongue for mixing device | Tap1210 |
| 116 | Cork descent duct | Tap1850 |
| 117 | Free wheel diameter 14 mm. | Tap0235 |
| 118 | Pinion for mixing device | Tap0215 |
| 119 | Elastic ring diameter 14 mm. | Tap0236 |
| 120 | Chain bar | Tap1652 |
| 121 | 8 mm. - link chain | Tap0237 |
| 122 | Spring | Tap0005 |
| 123 | Cylindrical head screw M6x20 | Tap0312 |
| 124 | Screw M8x16 | Tap0302 |
| 125 | Washer for screw M8 | Tap0303 |
| 126 | Screw M3x20 | Tap0351 |
| 127 | Nut M3 | Tap0352 |
| 128 | Right side plate | Tap1214 |
| 129 | Left side plate | Tap1215 |

# WHEELED SUPPORT MODEL A (OPTIONAL)




| POS. | DESCRIPTION | REF. |
|---|---|---|
| 200 | Frame | Tap1645 |
| 201 | Support | Tap1651 |
| 202 | Washer for screw M8 | Tap0303 |
| 203 | Screw M8x16 | Tap0302 |
| 204 | Nut M8 | Tap0306 |
| 205 | Screw M12x35 | Tap0344 |
| 206 | Plastic wheel | Tap0238 |
| 207 | Washer for screw M12 | Tap0345 |
| 208 | Nut M12 | Tap0346 |

# Component of the P12 corking machine