

P12 Corker

Addendum: Setup and Maintenance

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

Setup of the Corker

The corks have 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 Adjustment
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 corks.

Disconnect air line from corks 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 corks. 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.

This manual and parts for
Corks are available online.

www.StPats.com
stpats@stpats.com

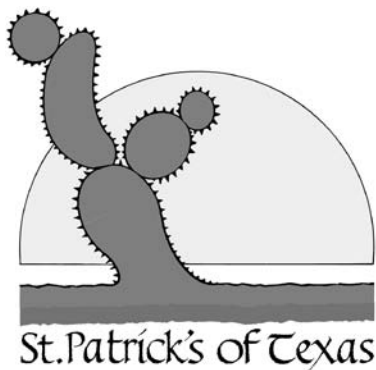


Fig. 1. Bottle Height---Top of bottle MUST be at this height or slightly higher.

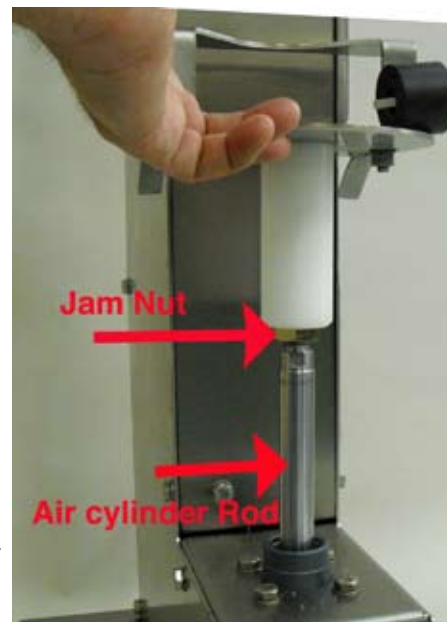


Fig. 2. Raise or lower bottle stand. Adjust Back Support to match Bottle Diameter. Note short spacer tied to the platform. Short spacer for ~13.5 to 15" bottles. Long spacer for ~11"-12". [Extra long spacer (optional) available online for ~9-10" bottles.]



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 corks 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 corks). 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.....	page 2
Operating directions.....	3
Technical details	4
Instructions for use.....	5
Faults and remedies check list.....	6
Maintenance	8
Pneumatic system	9
Components of the corking machine P12	10
Cork container for corking machine P12 - as optional equipment.....	12
Wheeled support model A - as optional equipment	13

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.

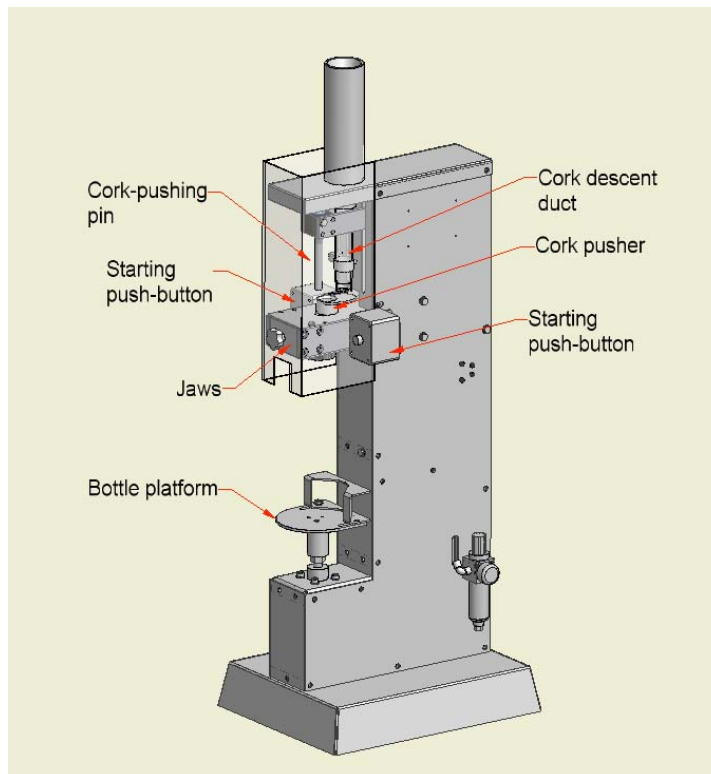
OPERATING DIRECTIONS

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

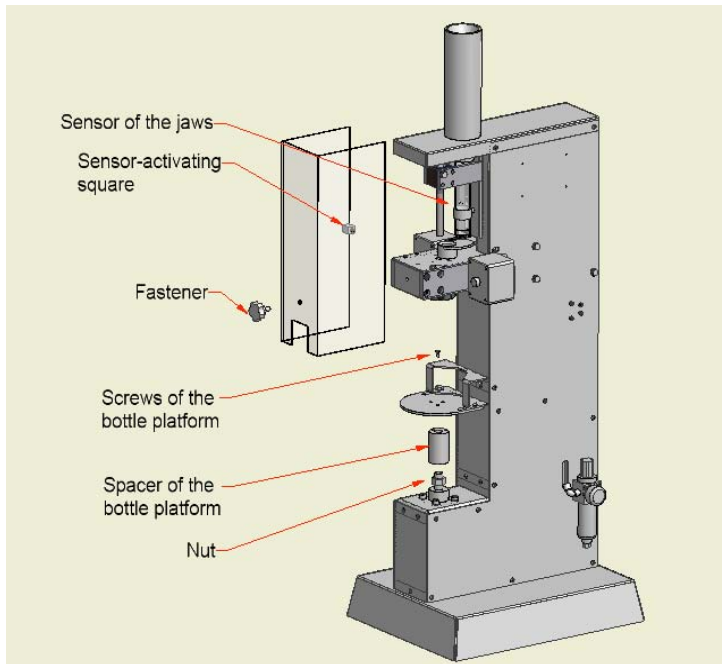
Air consumption for each corking (6 bar): 12,3 NI

INSTRUCTIONS FOR USE

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

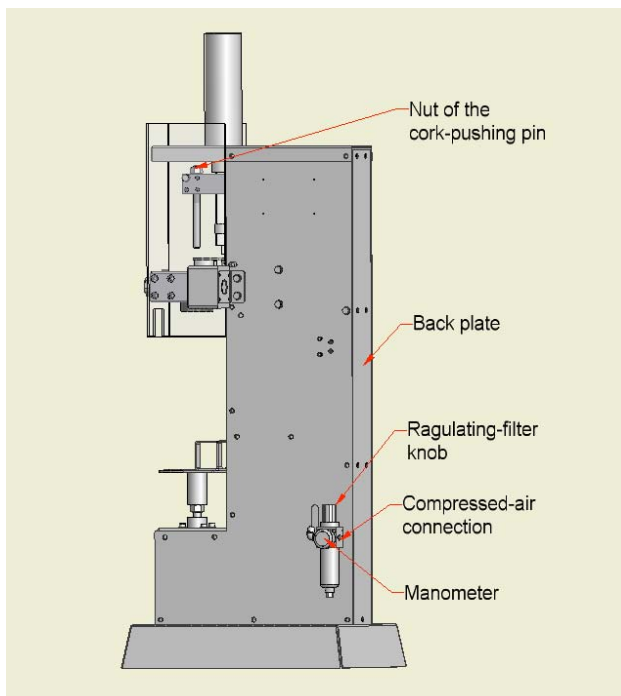
In case the corking machine P12 is fitted up with a wheeled support, make sure it is placed on an even ground.

- 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.

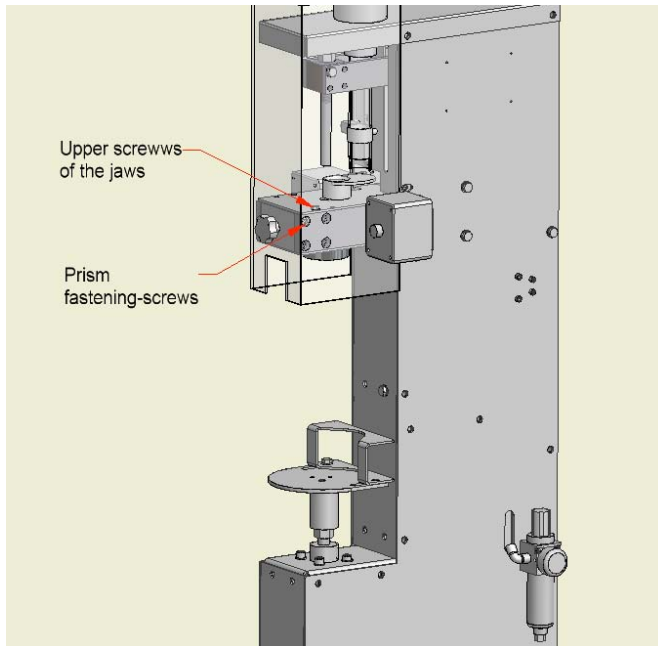
- In case the corking machine does not start check that the fastener of the plastic safety guard is tightened in the correct way and the sensor-activating square can start properly the sensor of the jaws.

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 manufacturer.

- 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 dirtying the corks.

ATTENTION

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

MAINTENANCE

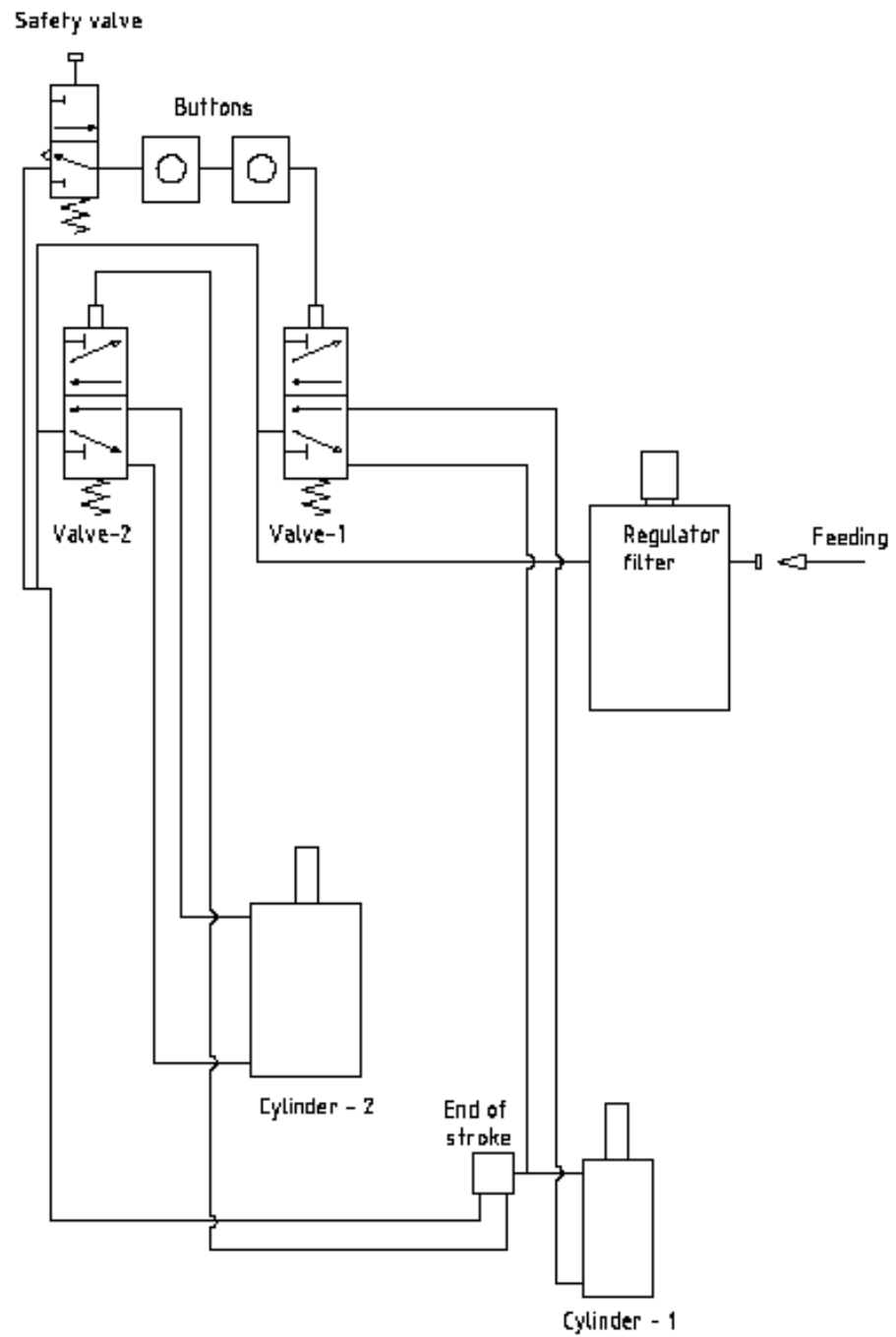
A long machine working life is dependent upon constant and methodical compliance with the following instructions:

- 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



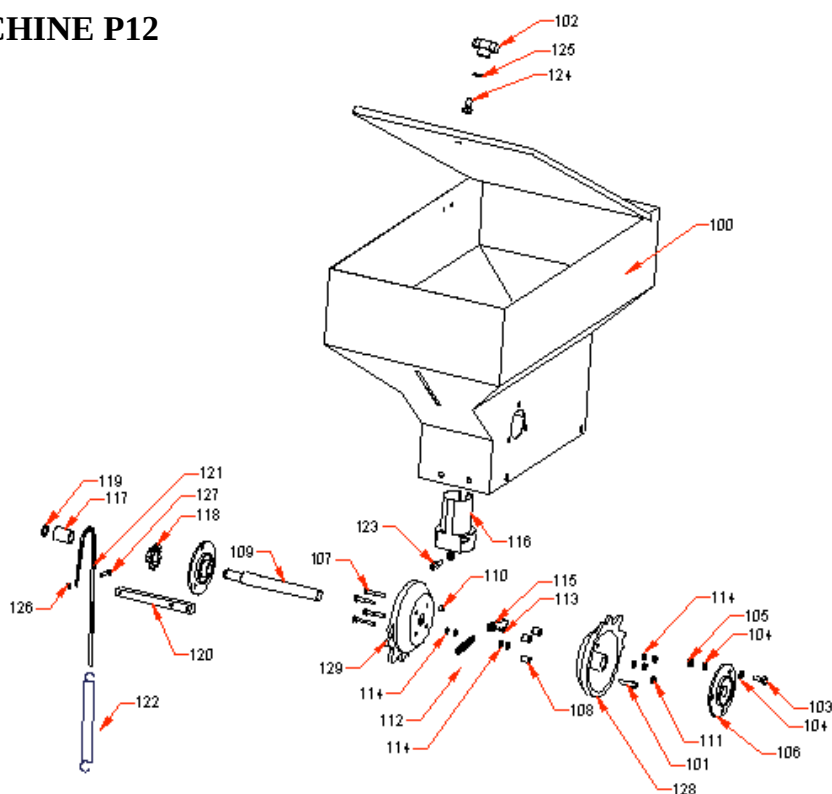
POS.	DESCRIPTION	REF.
1	Lower support	Tap1644
2	Threaded bushing	Tap1403
3	Cylindrical head screw M10x20	Tap0328
4	Nut M20	Tap0338
5	Cylinder 50 mm - 150 mm	Tap0413
6	Washer for screw M10	Tap0307
7	Screw M8x16	Tap0302
8	Washer for screw M8	Tap0303
9	Right side plate	Tap1630
10	Cylinder 80 mm - 125 mm	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 screw M5x12	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 screw M4x16	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

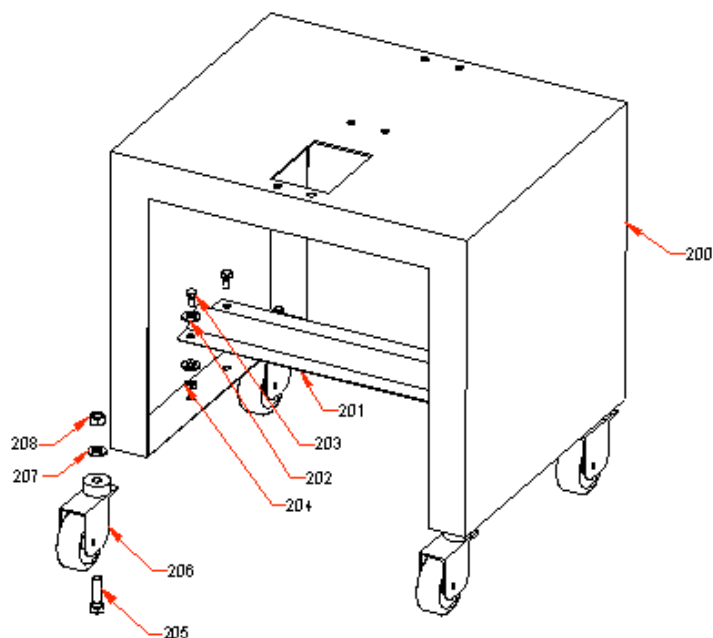
CORK CONTAINER FOR CORKING MACHINE P12 (OPTIONAL)



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

Complete the P1 machine

This exploded view diagram illustrates the assembly of the P1 machine. The components are numbered as follows:

- 1: Base plate
- 2: Motor
- 3: Gear
- 4: Gear
- 5: Piston
- 6: Piston
- 7: Piston
- 8: Piston
- 9: Piston
- 10: Piston
- 11: Piston
- 12: Piston
- 13: Piston
- 14: Piston
- 15: Piston
- 16: Piston
- 17: Piston
- 18: Piston
- 19: Piston
- 20: Piston
- 21: Piston
- 22: Piston
- 23: Piston
- 24: Piston
- 25: Piston
- 26: Piston
- 27: Piston
- 28: Piston
- 29: Piston
- 30: Piston
- 31: Piston
- 32: Piston
- 33: Piston
- 34: Piston
- 35: Piston
- 36: Piston
- 37: Piston
- 38: Piston
- 39: Piston
- 40: Piston
- 41: Piston
- 42: Piston
- 43: Piston
- 44: Piston
- 45: Piston
- 46: Piston
- 47: Piston
- 48: Piston
- 49: Piston
- 50: Piston
- 51: Piston
- 52: Piston
- 53: Piston
- 54: Piston
- 55: Piston
- 56: Piston
- 57: Piston
- 58: Piston
- 59: Piston
- 60: Piston
- 61: Piston
- 62: Piston
- 63: Piston
- 64: Piston
- 65: Piston
- 66: Piston
- 67: Piston
- 68: Piston
- 69: Piston
- 70: Piston
- 71: Piston
- 72: Piston
- 73: Piston
- 74: Piston
- 75: Piston
- 76: Piston
- 77: Piston
- 78: Piston
- 79: Piston
- 80: Piston
- 81: Piston
- 82: Piston
- 83: Piston
- 84: Piston
- 85: Piston
- 86: Piston

