

Users guide

Ceetec[®] P-40

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1. Introduction

The Ceetec P40 painting machine is built to treat wood with wood protection products. It is suitable for rough, planed and shaped wood. Key factors of the Ceetec P40 are ease and safety of operation and maintenance.

The simple machine construction makes it easy to use. The machine is on rubber wheels and can be easily moved around. It is suitable for workshops and building sites.

The machine is delivered complete with brushes and filter bags and is ready to use when power is connected.

Optional extras include roller conveyors, filter bags with various mesh widths and horse hair brushes.

2. Safety Instructions

Important:

The following safety instructions must be adhered to for reasons of personal safety.

All users must be familiar with these user instructions. Read thoroughly before use to know the machine functions entirely.

2.1 Use of machine

The machine is only to be used for treating wood with water and oil based wood protection products. The machine is not intended as washing- or cleaning machine, using chemicals for degreasing, removal of paint etc.

Do not use the machine with particular dangerous, unhealthy or flammable liquids.

Do always comply with the instructions given in the supplier directions of the used substances.

Misuse may lead to strangling, unconsciousness, brain damage, fire or explosion followed by combustion etc.

The machine is not constructed to be used in ATEX zone classified areas, and must **NOT** be used in zone classified surroundings.

2.2 Clothing

Avoid loose fitting clothing and loose, dangling hair when operating the machine.

2.3 Personal protective equipment

Use rubber gloves and eye protection when adjusting and cleaning the machine.

The operator that receives treated items from the machine must wear rubber gloves.

Choice of protective equipment should follow the recommendations from the supplier directions of the used paint.

2.4 Fluids:

The following fluids are suitable for use with this machine:

The used fluids – paints or cleaning products – must have a flash point at min. 10° C. above the surrounding temperature. Do not use liquids with a flash point lower than 40° C due to the risk of fire.

Attention:

Use eye protectors and gloves when operating the machine. By accidents the operator is to act according to the supplier directions of the used paint.

It is therefore important that this product information is available and is known and scrutinized.

2.4.1 Water based wood protection:

E.g.: Tintex Tinova VX, Ready V40, produced by Akzo Nobel. Gori 11, Gori 356, Gori 410, Gori 411, Gori 413, Gori 417, Gori 892, Gori 894 all produced by Dyrup A/S.

2.4.2 Oil based paint

E.g.: Gori 22 wood primer, Gori 44 wood protection, Gori 88 semi-/full coverage wood protection, Gori wood oil, Gori outdoor wood treatment, Gori 400, Gori 541, all produced by Dyrup A/S.

Fluids with a flash point lower than 40° C may not be used due to the risk of fire.

2.5 Room temperature

When using oil-based products, room temperature must not exceed 29° C, and it must stay minimum 10° C below the flashpoint of the used fluids/paints due to the risk of fire.

Note: Oil based products do not bind optimally when applied at a room temperature exceeding 25° C.

2.6 Ventilation

The machine should only be used in well-ventilated rooms or outdoors if convenient. Moreover attention about ventilation should be paid to the supplier recommendations of the used paints/fluids.

Treated items should be placed for drying in a ventilated place to avoid any obnoxious effects from the solvents.

2.7 Risks during use

Keep hands, etc., away from the machine inlet when the machine is running to avoid the risk of crushing.

2.8 Moving the machine

The machine can be moved around on the mounted rubber-wheels or by forklift. Before moving the machine it must be checked that all fluids are drained off.

When moving by forklift: Be aware that the forklift lifts under the contrived lifting marks.

When moving manually: Be aware that all needless gear has been taken out of the machine, and the machine is in god balance. Never try moving the machine manually on hilly ground.

3. Technical Data

Type:	P-40
Dimensions:	Height: 1.090 mm Length: 1.140 mm Width: 700 mm
Product number:	9010-05000
Motor, power connection Wattage, motor and pump:	3 x 400 V + J - IP classification: 65 0.37 kW
Forward drive speed:	Approx. 25 m/min
Pumps:	Approx. 10-15 L/min
Weight:	Approx. 115 kg
Max. Item dimensions:	25 x 175 mm or 40 x 100 mm
Min. item length:	800 mm

4. Preparing the machine for use

Place the machine on a flat, firm surface. Lower the four support legs so that the machine stands stable.

Screw the adapter for the filter bag (item 519) onto the outlet pipe and hang the filter bag (item 517) on it. Put the bucket with paint/fluid underneath the filter bag. Remember to stir the fluid. Place the suction and excess pressure hose (items 681 and 682) in the bucket.

The machine is attached to the power station following the local regulations. If it turns out to be necessary changing the plug, the directions from the supplier must be followed. This job is only to be done by a competent electrical specialist.

Emergency stop

Normally a person on each end operates the machine. Activating the emergency stops, which are placed by the operator on both ends, can stop the machine.

In case of accident either by the inlet or in danger of getting hit or getting caught by wood on its way in or out of the machine, you can prevent this by activating the emergency stops, which are placed by the operator on the inlet end.

When an emergency stop is activated the forward drive is stopped.

After activating the emergency stop, the machine can only be restarted by unlocking the emergency stop and hereafter press the black button, placed next to the emergency stop, down (you must push hard). The "0" must disappear in the little glass. Hereafter you must push the white button marked "I"

NB: Before starting the machine again be sure that the incident has come to an end, and that the reason for activating the emergency stop is known.

Stop

During normal use the machine is stopped by the black button marked "0". This function is used when changing colours, moving of the machine etc.

5. Adjusting the machine

The emergency stop must be activated. (The machine is disconnected from all power.)

NB: Use rubber gloves and goggles during the process. Check product information from the supplier of the used paint for further requirements regarding protection equipment.

1. The lid on the machine is opened

The lid of the machine and the cover above the nozzles is removed. Set the feeder guide and the back pressure roller in outer position. Feed the item into the machine.

2. Feeder guide

The feeder guide (pos. 627) guides the item sideways and the roller in front of the machine guides the item horizontally. Adjust the guides by loosening the wing screws and moving them towards the item. There must be a 2-3 mm gap on both sides.

3. Back pressure roller

The back pressure rollers (item 594) prevent the lower horizontal brushes "lifting" thin items (up to 20 mm) up. Adjust the rollers by loosening the wing screws and moving them towards the item. There must be a 2-3 mm gap between the item and the rollers. Set the brush covers at 10-12 mm from the item.

4. Nozzles

The nozzles (pos. 645) are adjusted until the required result is achieved. The nozzles are adjusted with the key attached to the machine.

5. Brushes

Rotating brushes apply fluids evenly and brush off excess fluid. The brushes are identical and made from hard-wearing nylon.

The brushes are mounted and removed by screwing off a single star handle.

6. Forward drive

The forward drive propels the item through the machine. The forward drive and the back pressure roller are both mounted with spring blades, which automatically adjust after the thickness of the item (0-40mm).

When operating with thick boards of 30-40 mm, you may, to ease the feeding, increase the distance between the valves. This is done by loosening the nuts on the horizontal plate in the inlet and moving the devices in order to increase or decrease the pressure.

7. Test run and flow rate

1. Pull the item out and put the cover on the nozzles back in place.

Check that the bucket containing wood protection is underneath the outlet pipe, and that the suction and excess pressure hose are placed in the bucket.

Position the main switch on the control panel to "I" (power is connected). (forward drive and pump will start).



Ensure that all valves are closed. Adjust the nozzles to the desired position. Adjust the fluid amount using the nozzle valves.

Always open the upper nozzle first. The machine can treat 1-2-3 or 4 sides of the item at the same time. Only open fluid nozzles for those sides that are to be treated. Opening the vertical nozzles is only necessary if the item is more than 20mm high or if there is a groove or similar that needs treating.

Feed the item into the inlet and check that the forward drive is running evenly. If forward drive is not running evenly, adjust the backpressure roller. The item can stop moving if it hits the feeder guide or the backpressure roller. In that case they should be re-adjusted.

The flow rate is adjusted via the nozzle valves. (pos 593). Always open the side nozzles first.

Test with the same item 2-3 times. This ensures that the brushes are wet. Test hereafter with a new wood item. If the result is satisfactory, the lid is put back on again. Operation is hereafter normal, but should be continuously checked.

6. Cleaning

6.1 After use of water based products

After daily use or when changing colour, it is **important** that the machine is thoroughly cleaned.

Due to safety it is important that signs and handles are kept clean and free of paint.

NB: Rubber gloves and eye protection must be used during the cleaning of the machine. Please follow the directions from the supplier of the cleaning products.

All loose parts

Wash down brushes, back pressure roller and guides with water, preferably hot water.

More thorough cleaning of loose parts *before re-using or when changing colour*

First clean the loose parts are described above.

Soak the parts in a mixture of 50% cleaning solution and 50% water. The brushes, and the brushes alone, can be kept in 100% cleaning solution. (Gori's cleaning solution no. 90910-00400 can, for example, be used).

It is important that the brushes are always stacked on "hub" of the brush to prevent the hairs being bent out of shape.

Rinse the parts thoroughly in water before re-use.

The machine

Take the suction pipe out of the bucket of wood protection.

Start the pump. Open the nozzle valves (remember to always open the side nozzles first). The last of the fluid will be pumped into the machine and return to the bucket. Close the nozzle valves after approx. 2 min.

The nozzle system is empty when air is pushed out of the excess pressure valve (seen as air bubbles in the bucket).

Replace the bucket with one bucket of 10 l. (approximately 2,5 gal.) of clean water and one empty bucket.

Place the suction tube into the bucket of water and the excess pressure hose into the empty bucket underneath the drain.

Start the pump and open the nozzle valves (remember to always open the side nozzles first).

Close the nozzle valves when clean water starts coming out of the nozzles.

Rinse the machine with clean water and a brush, if necessary.

Finally, clean the filter bag, suction filter and excess pressure valve.

More thorough cleaning of the machine before reuse or when changing colour

First clean the machine as described above.

Replace the buckets with a bucket of cleaning solution. Place the suction and excess pressure hoses into the bucket. Start the pump. Wash down the machine with the built in washing hose and a brush, if necessary.

IMPORTANT: Wash the machine for 5-10 minutes so that the cleaning solution has time to work.

Repeat the treatment if necessary. The cleaning solution can be re-used several times.

Dry the exterior of the machine with a damp cloth – dampened with cleaning solution.

Empty the machine of cleaning solution and rinse through with water.

IMPORTANT: All traces of cleaning solution must be rinsed from the machine as cleaning solution dissolves varnish.

Finally clean the filter bag, suction filter and excess pressure valve.

6.2 After using oil based products

After daily use or when changing colour, it is important that the machine is thoroughly cleaned.

Due to safety it is important that signs and handles are kept clean and free of paint.

NB: Rubber gloves and eye protection must be used during the cleaning of the machine. Please follow the directions from the supplier of the cleaning products.

All loose parts

Remove and clean the brushes, back pressure roller and guide with, if necessary, cleaning solution (for example Gori's cleaning solution 90900-00200).

Where the same colour is to be used the following day, soaking the brushes in cleaning solution is sufficient.

It is important that the brushes are always stacked on "hub" of the brush to prevent the hairs being bent out of shape.

The machine

Take the suction pipe out of the bucket of wood protection.

Start the pump. Open the nozzle valves (remember to always open the upper nozzles first). Remove the end plugs from the nozzles and the last of the fluid will be pumped into the machine and return to the bucket. Close the nozzle valves after approx. 2 min. The nozzle system is empty when air is pushed out of the excess pressure valve (seen as air bubbles in the bucket).

Never use cellulose thinners, toluene or strong solvents as these can dissolve paint and synthetic parts and also cause personnel safety threats. Place the suction tube into the bucket.



Start the pump and open the nozzle valves (remember to always open the side nozzles first).

Close the nozzle valves when they are clean.

Rinse the machine with the inbuilt washing hose and a brush, if necessary.

Finally, clean the filter bag, suction filter and excess pressure valve.

Repeat the treatment if necessary.

The cleaning solution can be re-used several times. Remember to rinse with clean cleaning solution afterwards.

Dry the exterior of the machine with a damp cloth – dampened with cleaning solution.

Empty the machine of cleaning solution.

Finally clean the filter bag, suction filter and excess pressure valve.

Where water based products are to be used following cleaning, the machine must be rinsed through with water.

7. Maintenance

Switch the main switch to "0" and unplug before commencing maintenance work.

All adjustable mechanical parts are easily accessed by removing the side panel and/or the lower protective caps.

Important. When the adjustments are done, assembling is done in reverse order. Do NOT start the machine before all safety guards are put back into place.

7.1 V-belts

Tighten the 2 v-belts after approx. 14 days of use. The belts must be tightened just right.

7.2 Motor v-belt – brush shaft (Pos 636)

Tighten by loosening the brush shaft (pos 660) and moving it.

7.3 Motor v-belt – brush shaft forward drive (pos 637)

Tighten by loosening the screw and changing the position of the tension roller (pos 652).

8. Replacing spare parts

Switch the main switch to "0" and unplug before replacing any parts.

Removing the side panel, shield on the rear and/or the removing the lower protection cap can easily access all replaceable parts.

When the adjustments are done, assembling is done in reverse order. Do NOT start the machine before all safety guards are put back into place.

Motor v-belt brush shaft

Loosen the motor (pos. 660) and move it. The v-belt can hereafter be replaced.

V-belt for brush shaft (pos 637)

The tension roller (pos. 652) is moved.

The pump sticks (pos. 668 and pos. 669) are dismantled.

The v-belt for motor –brush shaft (pos. 636) is dismantled.

The round belt for the horizontal brush shaft (pos. 638) is dismantled.

The V-belt can hereafter be replaced.

Round belt for horizontal brush shaft (pos. 638)

V-belt for motor – brush shaft (pos. 636) is dismantled

The round belt can hereafter be replaced.

Replacement of the pumps diaphragms

The finger screws are loosened (pos. C)

The straps as well as the pump caps (pos 666) are dismantled.

The bolts are loosened and the diaphragms can now be replaced (pos 792)

When dismantling its important to seal the screws (item E) (Teflon tape can be used) and to make sure that the diaphragms and caps are placed in the recess (the middle).

9. Trouble shooting

Fault	Possible cause	Action
A. Pumps/forward drive/brushes will not start	<p>The machine is not connected to the power source</p> <p>The main switch is turned off</p> <p>There has been a thermal cut-out</p>	<p>Connect the power</p> <p>Switch the main switch to position "1"</p> <p>Check the frequency converter in the electrics cabinet</p>
B. Forward drive roller and brushes are not rotating	<p>The power supply to the motor for the forward drive is interrupted</p> <p>The V-belts/toothed belts are too loose or damaged</p> <p>A belt is broken</p> <p>The forward drive roller, V-belt/pulley is not fastened to the axel</p>	<p>See "A"</p> <p>Tighten/replace the belt (-s)</p> <p>Replace the belts</p> <p>Fasten them to the axel</p>
C. No, or too little, liquid is coming out of the nozzles	<p>The power supply to the motor for the pumps is interrupted</p> <p>The nozzle valves are shut</p> <p>Grime in the suction filter</p> <p>The nozzles are blocked</p> <p>The springs in the excess pressure valve may be too loose</p>	<p>See "A"</p> <p>Open the nozzle valves</p> <p>Unscrew the filter strainer and clean. If necessary, blow clean pressurised air through it</p> <p>Remove and clean the flow nozzles and end plugs. Clean the nozzle hoses Check all the hoses for dirt Ensure that the hose couplings are tightened and sealed so that the pump does not suck in "false" air.</p> <p>Open all the nozzle valves Take the excess pressure valve out of the bucket. If lots of fluid comes out, the spring needs tightening (lengthening)</p>
D. The motor for the pumps cuts out	<p>The motor is overloaded because the excess pressure valve is blocked</p> <p>The motor is overloaded because the back pressure roller, and/or guides guide is too tightly adjusted up to the item.</p>	<p>Clean the excess pressure valve and hoses. When assembling the excess pressure valve, the grey gauge block must face in towards the valve. Wait approx. 10 minutes and then reset the pump motor.</p> <p>Adjust the setting. Wait approx. 10 minutes and then reset the motor</p>

10. Spare part list

Number guide:

The last 3 numbers refer to the item numbers on the detail pictures placed in the back of this folder.

E.g. filter bag 600 (order number 9011-20517 = item 517)

Item no	Piece	Description	Picture
9011-05610	1	Shaft for drive roller	A
9011-05611	1	Flexible shaft for drive roller	A
9011-05612	1	Bearing for drive roller	A
9011-05613	1	Shaft for v-belt pulley, drive roller.	C
9011-05614	1	Drive roller	A
9011-05620	1	Counter-pressure roller	A
9011-05621	1	Shaft for counter-pressure roller	A
9011-05622	1	Brush shaft, vertical brushes	A
9011-05623	1	Brush shaft, horizontal brush	A
9011-05626		Spring blades long/short	A
9011-05627	1	Center guides compl.	A
9011-05628	1	Forks for drive	A
9011-05636	1	V-belt, motor – and brush-shaft	C
9011-05637	1	V-belt, drive for brush-shaft	C
9011-05638	1	Round belt between vertical brush-shafts	C
9011-05639	1	Round belt for horizontal brush	A
9011-05646	1	V-belt pulley, motor	C
9011-05647	1	V-belt pulley, vertical brush	C
9011-05648	1	V-belt pulley, vertical brush	C
9011-05649	1	V-belt pulley, drive roller	C
9011-05650	1	Round-belt pulley, vertical brushes	C
9011-05651	1	Round-belt pulley, horizontal and vertical brushes	A
9011-05652	1	Tightening roller for V-belt	C
9011-05660	1	Motor	C
9011-05662	1	Modular brush, long conic	A
9011-05663	1	Modular brush, short conic	A
9011-05665	1	Pump	C
9011-05666	1	Pump cover with check-valves	C
9011-05667	1	Pump piston with thrust plates	C
9011-05668	1	Pump lever, long (370 mm)	C
9011-05669	1	Pump lever, short (150 mm)	C
9011-05677	1	Eccentric block for pump	C
9011-05679	1	Nozzle pipe, complete, top	A
9011-05680		1 complete set of hoses with connections	



Item no	Piece	Description	Picture
9011-05681	1	Suction hose 3/4" x 1150 mm	B
9011-05682	1	Armoured hose 1/2" x 3 mtr.	B
9011-05689		Scraper (set)	A
9011-05699	1	Modular brush, short	
9011-10742	1	Pressure control valve	A
9011-10743	1	Suction hose 3/4" x 1150 mm	B
9011-10775	1	Suction hose with connections	B
9011-10792		1 set of diaphragms	C
9011-20515	1	Leg	B
9011-20516	1	Filter bag 1000 µm	
9011-20517	1	Filter bag 600 µm (standard)	B
9011-20518	1	Filter bag 800 µm	
9011-20519	1	Adapter head to filter	B
9011-20543	1	Spring for pressure control valve	B
9011-20547	1	Lockcotter	A
9011-20551	1	Ball bearing	C
9011-20553	1	Ball bearing	A,C
9011-20562	1	Wheel	B
9011-20593	1	Valve for nozzle	A
9011-20594	1	Counter pressure - roller	A
9011-20645	1	Nozzle 3 mm	A
9011-20686	1	Plane supporting roller to conveyor	

11. Accessories

The following accessories are available for the Ceetec P40

9011-05603	1	Set of conveyor 2 x 2 mtr.	
9011-20504	1	Carrying roller with smooth rollers (front)	
9011-20505	1	Carrying roller with pulley roller (rear)	
9011-05664	1	1 set complete brushes	
9011-05664a	1	1 set complete horse hair brushes	

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