

Instructions:

Erkpress 300 Tp Pressure forming unit for connection to the compressed air system available.

Erkpress 300 Tp-ci Pressure forming unit with integrated compressor and reserve compressed air.*



The function of the two units is identical. The units are equipped with a touchless temperature control** and touchpanel for programming.

* Pat. 19518211

**Pat. EP 1 905 380

Compressed air supply and pressure regulator (only Tp 300)

Touchpanel

Medium-wave infrared heating element

Sensor window

Main switch

Fixture for foil reception

Mains connection (on the side)



Form pot with model plate and Granules collecting device

Foil reception

Foil securing ring



Technical data:

Measures: Erkopress 300 Tp		300 Tp-ci	Temperature sensor: touchless infrared sensor measuring range up to 240 °C
height	320 mm	320 mm	
width	350 mm	350 mm	
depth	430 mm	510 mm	
weight	16.7 kg	20.9 kg	
Electricity: voltage:	230/240, 50 Hz	230/240, 50 Hz	Foil measures: diameter 120 mm, thickness 0 - 6.0 mm
	115/100, 60 Hz	115/100, 60 Hz	Form pot inner measures: diameter 101 mm, height 42 mm
watt:	340 W	480 W	Pressure technique: Erkopress 300 Tp , operating pressure 3-6 bar min. system pressure 6 bar, pressure regulator
Fuse:	230/240 V 2 x T-2 A	2 x T-2,5 A	Erkopress 300 Tp-ci , with integrated compressor and reserve pressure 7 bar operating pressure up to 6 bar, noise level, compressor < 74 db(A)
	100/115 V 2 x T-6,3 A	2 x T-6,3 A	
Heater: medium-wave infrared heater			
230/240 V, 50 Hz or 115/100 V, 60 Hz	280 W		

Security

Before starting please read instructions for use. The operator of the machine is responsible for the compliance with regulations for accident prevention concerning technical security. The construction of the Erkopress 300 Tp/Tp-ci unit complies to legal standards.

ATTENTION! Security hints

Always disconnect the unit from the mains supply before carrying out cleaning, maintenance and repair work. Do not touch heater - hot surface! Do not put your hands in the housing. Only operate the machine under supervision. Do not keep highly inflammable materials in direct area of the machine.

Usage as directed

The Erkopress 300 Tp/Tp-ci unit should only be used with suitable dental thermoforming material in diameter 120 mm and thickness of up to 6 mm for forming on suitable models. In case of non-observance, we cannot take any liability or guarantee for damages.

Cleaning and maintenance

The unit should be cleaned with a damp cloth. Do not use any solvents or other cleaning agents.

Maintenance please see page 10.

Installation instructions

The Erkopress 300 Tp-ci is connected to electricity independently of a compressed air equipment. The Erkopress 300 Tp is connected to the compressed air equipment available and to electricity. The appliance should be installed in dry and dust-free conditions and where required stored temporarily.

A reliable operation of all functions is only guaranteed at a unit temperature of $\geq 15\text{ }^{\circ}\text{C}$.

Putting into operation: Erkopress 300 Tp (1.-2.): Assemble pressure regulator with water separator, thereto put the unit on its back side. Fix the holding bow with the supplied screws. Position the appliance, insert the power supply cable in the machine and the wall socket.



Erkopress 300 Tp-ci: Position the appliance, insert the power supply cable in the machine and the wall socket. **Unplug the appliances when not in use.**



Spare sealing foil cylinder
110 857



Spare sealing for foil securing ring
110 857



Recommendation

Use the machine only with granules. Excessive granules will fall in the surrounding granules collecting device.

In order to avoid damages of the unit there must not be any granules in the red-bordered area (holding fixture for model pot)!

To avoid damages, remove granules from the base plate with magnets supplied along. Never blow out!

The symbols of the touchpanel:

						
refer to instructions	main menu	list of foils	favourites	new foil	special functions	language selection
						
continue	back	ok continue	abort	add favourite	change presetsings	foil thickness
						
foil temperature	cooling time	rated temperature	delete	heating off	heating on	



Main switch

Switch on appliance

Attention: Program language ex works is German!

A picture in the touchpanel reminds to clean the sensor window. A dirty sensor window leads to measurement errors. If necessary, dust off or clean with a damp cloth (no cleaning agents!).

After a few seconds the basic display (menu) automatically appears.

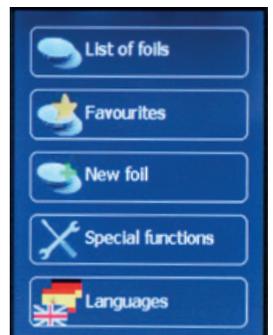
The touchpanel responds in the framed function fields on slight pressure.



Sensor window

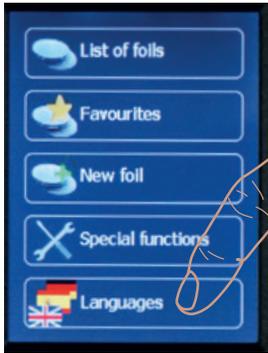


For input, the enclosed brush for granules is equipped with a rubber cap. Input is also possible with fingers.



Select language: For any further use of the machine, the language that was selected last time is used.

1. Select field of languages



2. Select language



3. Menu, selected language



Select foil *example, Erkodur, thickness 1 mm*

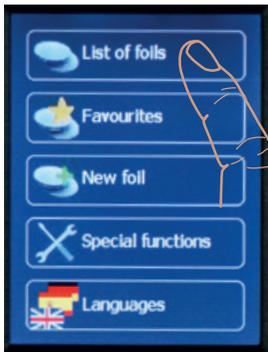
The list of foils contains all foils of the Erkodent range of products that can be used with this machine and that have been available at the time of production of this unit.

Thumb list of foils

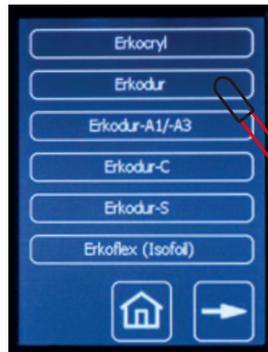


back menu continue

1. Select list of foils



2. Select Erkodur



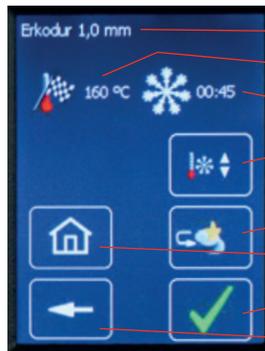
3. Select 1.0 mm



4. selected foil



Functions of this display



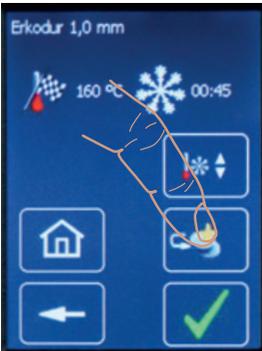
- selected foil
- rated temperature
- cooling time
- change cooling time and rated temperature
- save foil as favourite
- Menu
- OK, next step
- one program step back

Save favourites

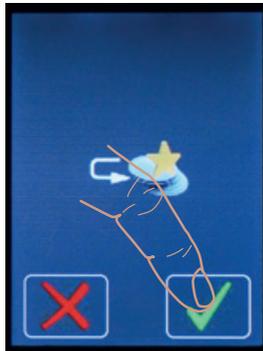
The list of favourites allows a quicker selection of often used foils. To save a foil in the list of favourites, this foil is selected out of the list of foils as described under "select foil". New foils, either future Erkodent foils or foreign foils, are entered with the functional field "new foil" and are saved in the list of favourites.

After having selected the desired foil from the list of foils the display 1. will be visible. To save the foil as favourite, select „to favourites“.

1. Select add favourite



2. confirm add favourite

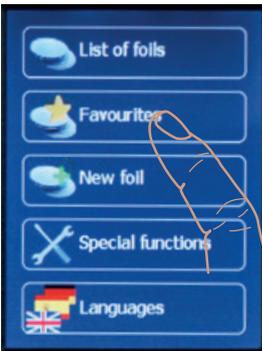


3. The favourite appears and can be processed

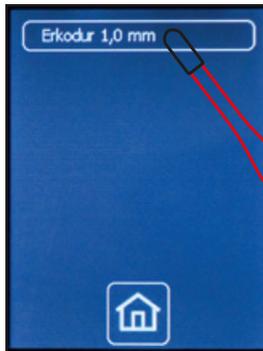


Delete favourite

1. Select favourites



2. Select favourite



3. select delete favourite



Recommendation: If an Erkodent foil will be saved with the factory parameters and as a favourite with changed parameters, the changed one should be saved as new foil with a different name in order to avoid any mix-up.

4. confirm delete favourite



Thermoforming

1. Selected foil

2. Foil is heated

3. Attention thermoform shortly

4. Rated temperature reached, **thermoform!**



to 1. Correct foil selected?

If yes, confirm.

As soon as the foil is confirmed the further working steps appear. These videos will be stopped with the next step.

Turn fixture for foil reception upwards and then to the right (a/!/ok) until it clicks into place.

Put in the selected foil Erkodur 1.0 mm and clamp with the foil securing ring (b).

Embed the model now or during the heating process in the granules. (c). Push form pot with model backwards into the appliance as far as it will go. (d).

to 2. Place foil reception with plate onto the fixture and push it under the heating until it clicks into place (e/f).

The foil temperature appears, the foil is heated.

to 3. 10 °C before reaching the rated temperature, a warning signal sounds and a warning sign flashes.

The functional field „X“ interrupts the heating process and leads back to the display (1).

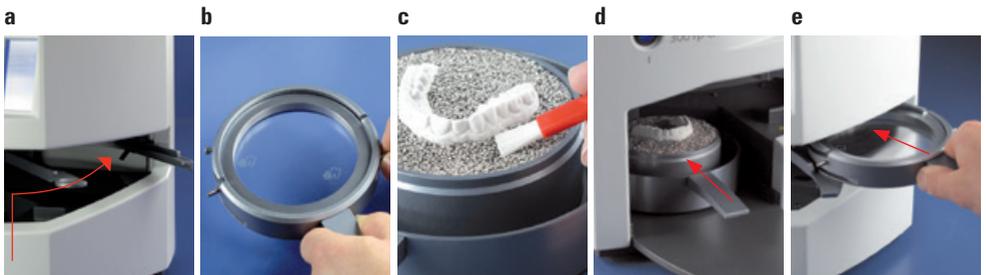
If the foil is pulled out of the heating area (max 3 sec.), the working steps videos reappear (1).

to 4. After reaching the rated temperature the mandatory movement appears on the display to perform the thermoforming process.

Move by pivoting the foil reception at the grip cavity as far as it will go leftwards and push it downwards onto the form pot.

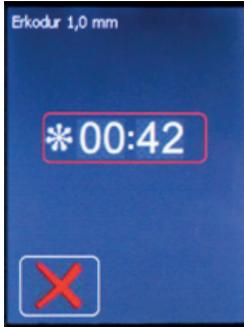
The form pot has to be placed at the stop position at the very back, otherwise the cylinder will not disengage. At the same time the protection shield (red) will be pulled downwards and disengage the cylinder (g).

Upon reaching the rated temperature the heating switches off.



Thermoforming

5. Cooling time



to 5. After thermoforming the cooling time runs backwards.

The cooling time can be interrupted with the functional field "X".

6. Cooling time expired



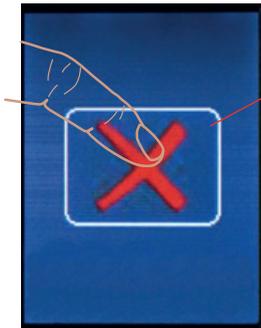
to 6 + 7. After the cooling time the display shows the further steps to pull the model pot out of the unit and remove model and foil out of the foil reception (g - i).

7. Display after thermoforming



to 6. + 7. If the same foil is to be thermoformed, choose the green tick.

If not, back to the menu: 



Each abort has to be confirmed

If within the next 10 sec. the next required working step is not performed, the working program will be switched off for safety reasons.



Enter new foils

New foils can be future Erkodent foils or foreign foils.

If Erkodent launches a new foil the necessary data will be found on the label

(example: Erko new (neu), thickness 1.8 mm, rated temperature 150°C, cooling time 1:40 min.).

The foil can be saved under input „New foil“. In case of foreign foils the rated temperature and the cooling time have to be determined with the help of the special functions.

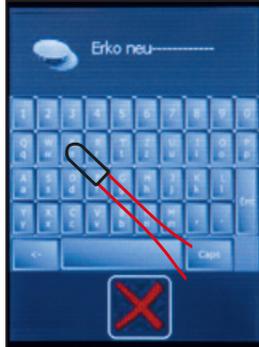
The new foils will be saved in the list of favourites and selected via this list.

Hint: Max. 240°C can be entered as rated temperature. The cooling time has to be at least 30 sec. Otherwise there may be malfunctions.

1. Select new foils



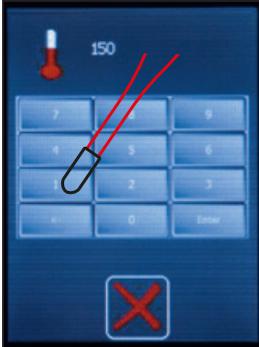
2. Enter foil name



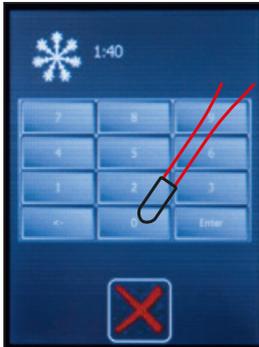
3. Enter foil thickness



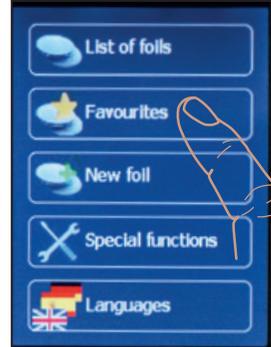
4. Enter rated temperature



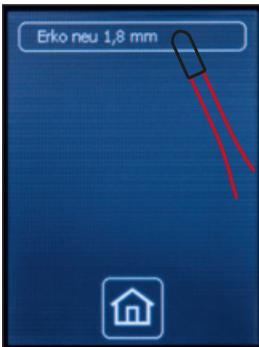
5. Enter cooling time



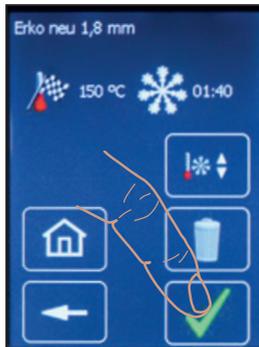
6. Select favourite



7. Select new foil



8. Thermoform new foil



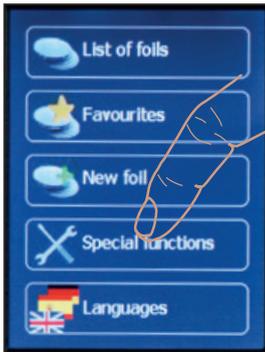
To 6., the new foil is saved as favourite, the menu appears.

Special functions

The special functions allow to switch on and off the heating and the compressed air (Tp 300-ci, integrated compressor) independently of the program.

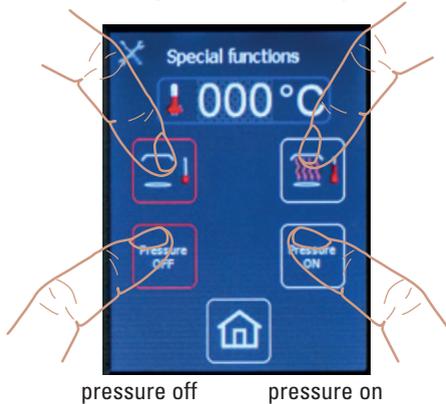
To determine the rated temperature (thermoforming temperature) of an unknown foil, select "heating on" (2.) and clamp the foil in the foil frame as mentioned under "thermoforming". As soon as the foil frame clicks into place under the heating (a), it will be switched on and the sensor will measure the temperature of the foil. If it is intended to afterwards thermoform the foil, select "pressure on" (3.) and thermoform as described under "thermoforming".

Select special functions



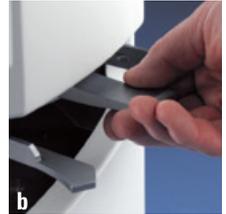
heating off

heating on



pressure off

pressure on



To check the thermoformability, pull the foil out (c) and check with a blunt instrument. If permanent impressions result, generally the foil is ready for thermoforming (d). The heating switches off, if the foil is pulled out of the heating area, if "heating off" is selected or if the sensor measures $>240\text{ °C}$.

The temperature shown on the display is the temperature measured at last. If the foil is ready for thermoforming, this temperature corresponds to the rated temperature.

To determine the cooling time, the time beginning with the adaptation is measured. For the first time select "pressure out" after app. 1 minute, the cylinder moves upwards, the foil can be pulled out, **attention: risk of burning!** The correct cooling time is achieved if the foil on the surface has app. room temperature. The foil can now be saved, as described under "enter new foils".

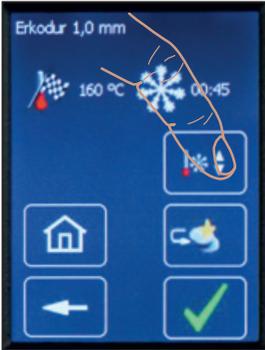


Change factory settings for foils

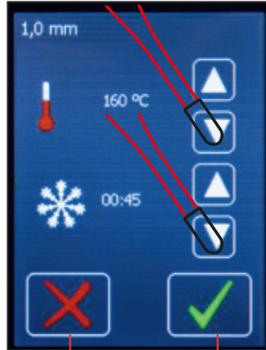
The rated temperature and the cooling time can be changed for one single thermoforming process or constantly, in the latter case as favourite.

The changes are done in the window "selected foil" or "favourite", see "select foil" or "save favourite".

1. Select change



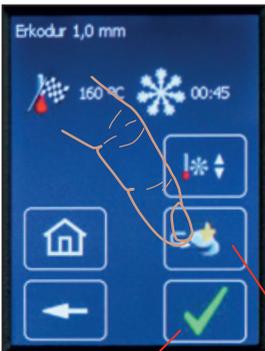
2. Change rated temperature and cooling time



Abort

Save

3. Thermoform or save as favourite



Thermoform once with the changed data.

Save as favourite. As favourite the changed data and the foil name will remain.



Maintenance Erkopress 300 TP/300 Tp-ci:

To ensure that the unit maintains its full function, the rubber seals require replacing once a year when the unit is permanently in use. The new seals should be firmly pushed into position (see page 1).

Extremely dirty high-grade steel granulate should be purified or replaced. The air outlet holes at the side of the model pot must not be blocked.



Maintenance Erkopress 300 Tp

The condensation water level in the water separator must not exceed the marking "max".

To drain water press the black drain for water removal upwards with a suitable cup.

Trouble shooting:

Mistake	possible reasons	possible elimination
machine not ready to use, no display in the touch panel	power supply defective, room temperatur below 15 °C	check wall socket, machine plug, fuses, operating temperature > 15 °C
heater does not glow	foil reception not quite on the right side and not locked under the heating	check position of the foil reception (page 5+6, pictures a, e + f)
pressure cylinder does not, or incompletely extend	protection shield not extended	move foil reception only in the rear-most position (page 5, to 4.)
	form pot is not in the rearmost position	push form pot until it stops backwards into the device (page 5, picture d).
	not enough pressure (300 Tp)	system pressure at least 6 bar, pressure line with min. 6 mm inner diameter, eliminate creases of the pressure line.
pressure cylinder does not seal (blowing sound)	form pot is not in the rearmost position, bent fixture of the foil reception (transport damage?)	push form pot until it stops backwards into the device, fix or replace fixture. (customer service)
program reacts absurdly	system crash	restart (switch machine on and off)
absurd temperature indication	sensor window soiled	clean sensor window
adaptation not sufficient	granules on sealings, hole in the foil, sealings used, system pressure too low	remove granules, exchange sealings, check pressure line, minimum system pressure 6 bar

Delivery form Erkopress 300 Tp/300 Tp-ci

please check concerning completeness

Piece:	Article:	Order number:
1	Erkopress 300 Tp with pressure regulator/water separator	171 000
1	Erkopress 300 Tp-ci with integrated compressor and reserve compressed air	171 500

with accessories as follows:

1	foil securing ring	171 050
1	foil reception	171 023
1	granules collecting device	171 025
1	model plate	171 026
1	form pot	171 021
1	brush for filling granules with rubber cap can also be used as input pen	188 530
1	on-off magnet red or green to collect filling granules	red, 110 890 green, 110 891
1	power supply cable	170 001
1	filling granules (subsequent supply) (supplied with Erkopress 300 Tp/Tp-ci, 1.8 kg) high-grade steel granules (magnetic) with rounded edges	110 852 (1.3 kg)
1	foil trial package including list of contents	
1	machine documents (folder), instructions, thermoforming technique manual, material card, Erkodent program, guarantee card, declaration of conformity (if applicable)	



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