

Instructions:

Erkpress *motion*



Erkpress *ci motion*



Instructions



Video

Instructions:

Erkopress *__motion*

Pressure forming unit with automated thermoforming process to connect to the existing compressed air system.



Pressure forming unit with automated thermoforming process and integrated production of compressed air with reserve compressed air.*

* Pat. 19518211



CE

The Erkopress *__motion*/ *ci_motion* units are in accordance with the respective legal standards that are listed in the declaration of conformity on page 2 of this operating manual.



Safety:

- Before starting please carefully read this operating manual.
- The operating company has to ensure that the operator has read and understood the operating manual.
- The operational safety of the unit is only guaranteed when it is used in accordance with the legal accident prevention and the safety guidelines are observed by the operator.
- Do not keep highly inflammable materials in direct area of the machine.
- Only operate the unit under supervision.
- The voltage of the power source has to be identical to the voltage indicated on the type plate.
- **Attention hot**, do not touch the heating element.
- Do not reach into the unit.
- Unplug the appliance when not in use.
- Before cleaning, maintenance and repairing always unplug the unit and allow to cool down.
- The unit should only be cleaned with a damp cloth. Do not use any solvents or other cleaning agents.
- Maintenance see page 12.
- Repairs of the units must only be carried out by trained personnel using original spare parts. Otherwise the manufacturers liability and warranty expire.

Usage as directed:

- The units are intended for the use in the dental thermoforming technique.
- They must only be operated by instructed personnel and only using thermoforming material in Ø 120 mm and up to 5.5 mm thickness to adapt on suitable models. Otherwise the product liability expires.

Installation instructions:

- Place the unit on a plane ground. Pay attention to the fact that the weight of the unit with accessories is approx. 30 kg.
- Install the unit in a dry and low-dust environment.
- Avoid draught (air-conditioning, ventilator, open window) at the installation place since this might cause errors during the temperature measurement by the sensor.
- The Erkopress *__motion* is connected to the compressed air equipment available (mains pressure > 6 bar, inner diameter of the feed cable at least 4 mm) and to electricity.
- The Erkopress *ci_motion* will be connected to electricity independently of a compressed air equipment.
- A reliable operation of all functions is only guaranteed at a unit temperature of 15 °C.



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- **DE: EG-Konformitätserklärung**
- **EN: EC Declaration of Conformity**
- **FR: Déclaration de conformité pour la CE**
- **ES: CE Declaración de Conformidad**
- **IT: Dichiarazione CE di conformità**
- entsprechend der EG-Richtlinie Maschinen 2006/42/EG
- according to directives for machines 2006/42/EC
- conforme aux directives pour des machines de la CE 2006/42
- según las normativas para máquinas 2006/42/CE
- secondo la direttiva macchina CE 2006/42/CE

Wir · We · Nous · Nosotros · Noi

Erkodent Erich Kopp GmbH - Siemensstraße 3 - 72285 Pfalzgrafeweiler

- erklären in alleiniger Verantwortung, dass das Druck-Tiefziehgerät
- declare under our sole responsibility, that the pressure forming machine
- déclarons sous notre seule responsabilité que l'appareil de thermoformage à pression
- declaramos bajo propia responsabilidad que la máquina de presión para plastificación
- dichiara sotto la propria responsabilità che la termoformatrice a pressione

Type/Tipo:

Erkopress

Modell/ model/modèle/ modelo/modello:

_motion (Seriennr.-Bereich / serial numbers / números de serie / numéros de série / numeri di seri: 99-3100)

ci motion (Seriennr.-Bereich / serial numbers / números de serie / numéros de série / numeri di seri: 98-3000)

DE: den folgenden Bestimmungen in der jeweils aktuellen Version entspricht:

Richtlinie Maschinen 2006/42/EG · EMV-Richtlinie 2014/30/EU · DIN EN 12100 Sicherheit von Maschinen
 · EN 13849-1 Sicherheitsbezogene Teile von Steuerungen · DIN EN ISO 14120 Sicherheit von Maschinen -
 Trennende Schutzeinrichtungen · Richtlinie 2011/65/EU (gefährliche Stoffe, RoHS)

EN: complies with the following regulations:

guideline 2006/42/EC · guideline 2014/30/EC · EN 12100 · EN 13849-1 · EN ISO 14120 · guideline 2011/65/EC

FR: est conforme aux normes suivantes:

directive 2006/42/CE · directive 2014/30/CE · norme européenne EN 12100 · norme européenne EN 13849-1
 · norme européenne EN ISO 14120 · directive 2011/65/CE

ES: está en conformidad con las prescripciones siguientes:

normativas 2006/42/CE · normativas 2014/30/CE · EN 12100 · EN 13849-1 · ISO 14120 · normativas 2011/65/CE

IT: è conforme secondo le normative seguenti:

direttive 2006/42/CE · direttive 2014/30/CE · EN 12100 · EN 13849-1 · EN ISO 14120 · direttive 2011/65/CE

Unterlagenbevollmächtigte Person · authorized person for documents · agent pour les documents · comisionado para documentos · persona autorizzata per i documenti

Hans-Peter Kopp, Siemensstraße 3, 72285 Pfalzgrafeweiler, Germany

Pfalzgrafeweiler, 13.03.2025



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Hans-Peter Kopp

Geschäftsführer · Managing director · Gérant de société · Gerente

Erkopress _motion + Erkopress ci_motion

Start-up:

(Pay attention to the installation instructions)

Erkopress ci_motion:

Connect to the power supply

Erkopress _motion:

Install pressure regulator

Components pressure regulator:
a) Pressure regulator with water separator.

b) Black pressure hose

c) Support bracket

d) Brass nut

Installation:

Push the black pressure hose into the compressed air connector at the pressure regulator (1).

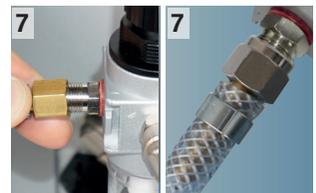
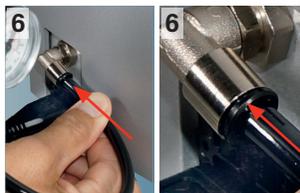
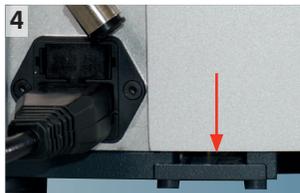
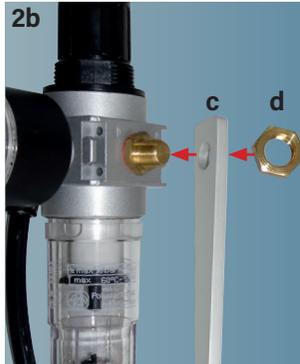
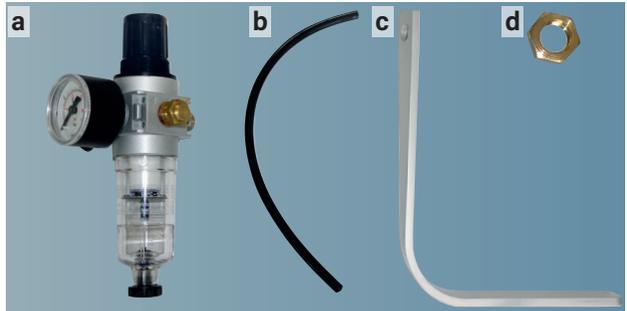
Arrangement (2a)

Fasten the support bracket (c) to the pressure regulator with the brass nut (d) (2b), paying attention to a parallel alignment (3) of pressure regulator and support bracket.

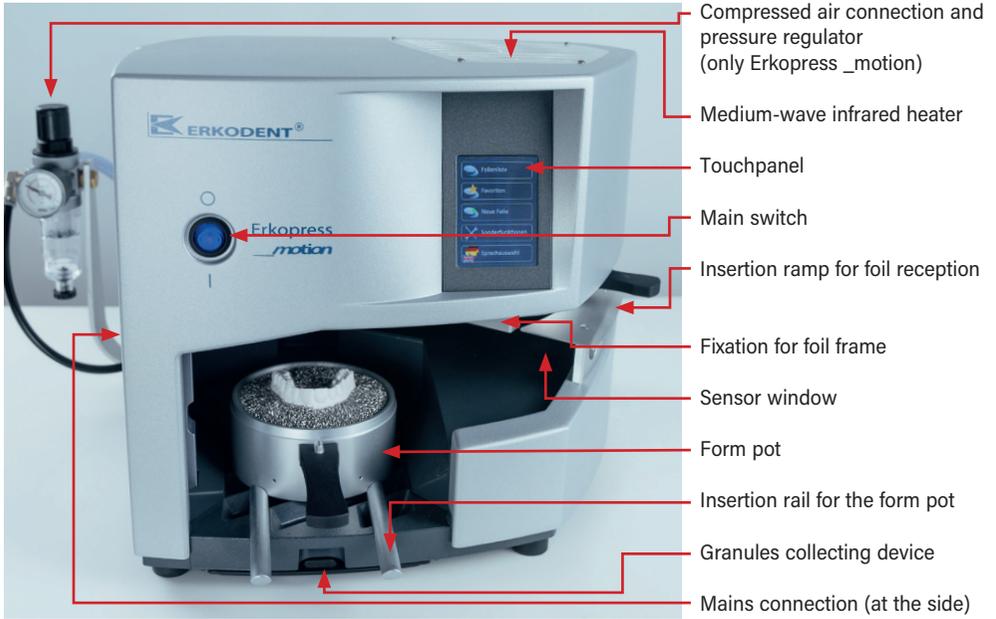
Push the support bracket into the provided opening until it stops (4+5).

Push the black pressure hose into the compressed air connector at the unit (3).

Screw on the hose connection (7) and connect to the compressed air supply (7). (compressed air settings, see technical data)



Erkpress *_motion* + Erkpress *ci motion*



- Compressed air connection and pressure regulator (only Erkpress *_motion*)
- Medium-wave infrared heater
- Touchpanel
- Main switch
- Insertion ramp for foil reception
- Fixation for foil frame
- Sensor window
- Form pot
- Insertion rail for the form pot
- Granules collecting device
- Mains connection (at the side)

Technical data:

Dimensions: Erkpress <i>_motion</i>	ci motion	Temperature sensor: touchless infrared sensor, measuring range up to 240 °C
Height 320 mm	320 mm	Foil dimensions: Ø120 mm, thickness 0 - 5.5 mm
Width 350 mm	350 mm	Form pot inner dimensions: Ø 101 mm, height 44 mm
Depth 430 mm	430 mm	Erkpress <i>_motion</i> , operating pressure 3 - 6 bar, required mains system pressure > 6 bar, pressure regulator, factory setting 4.5 bar, noise level <70 dB(A) at 30 cm distance
Weight 18.9 kg	21.3 kg	Erkpress <i>ci motion</i> with integrated compressor and reserve compressed-air, operating pressure up to 6 bar, noise level <70 dB(A) at 30 cm distance
Electricity: ~220 - 240 (100,110 - 120) volts, 50 - 60 hertz		
max. 380 watt	440 watt	
Fuse: 230/240 V 2 x T-2 A	2 x T-2.5 A	
100/115 V 2 x T-4 A	2 x T-5 A	
Heater: medium-wave infrared heater, 280 watt		

Pressure regulator, only Erkpress *_motion*:

The operating pressure of the Erkpress motion device can be set between 3 and 6 bar, the factory setting is 4.5 bar.

Increase or decrease pressure:

- Pull up the pressure regulator head
- Select operating pressure (3 - **max. 6 bar**)
- Press the pressure regulator head back



Unit components:

form pot with granules



form pot with model disc



model disc with dental arch (not included in delivery)



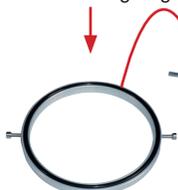
foil reception



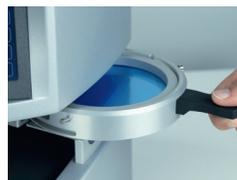
insert foil



foil securing ring



foil reception with foil



Recommendation, always thermoform with filling granules, work in the enclosed white worktray.



Remove granules with the supplied magnet. **Never clean by blowing 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 presets



foil thickness



foil temperature



cooling time



rated temperature



delete



heating off



heating on



move support for foil reception



start thermoforming



Attention risk of crushing



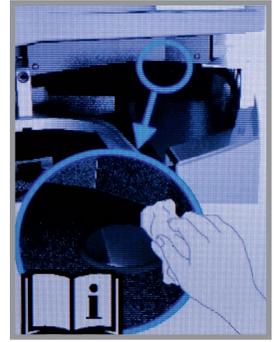
main switch

Switch on the unit

Switch on the unit at the main switch.

The touchpanel first shows the Erkodent Logo and then it requires to check if the sensor window is dusty or dirty. If so, dust off or clean with a damp cloth (no cleaning agents!).

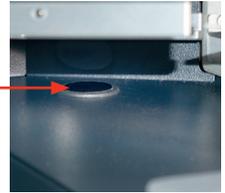
After a few seconds the basic display automatically appears.



The touchpanel responds in the framed function fields on slight pressure. For input the enclosed brush for granules is equipped with a rubber cap. However, input is also possible with fingers.



The **sensor window** is located behind the insertion ramp.



Basic display: Select language, for any further use of the unit the language selected last time is used.

1. Select language selection



2. Select language



3. Menu, selected language



Note: The function field »X« interrupts the respective process. Each termination has to be confirmed.



Note: The function field »delete« has to be confirmed.



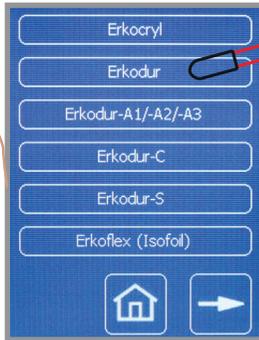
Note: If within 10 seconds the next required working step will not be performed, the working program will be switched off for safety reasons.

Select foil: The list of foils contains all foils of the Erkodent product range that can be used with this machine and that have been available at the time of production of this unit. (Example, Erkodur, thickness 1.0 mm)

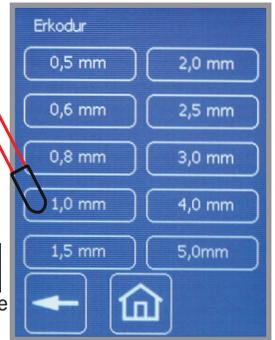
1. Select List of foils



2. Select Erkodur



3. Select 1.0 mm



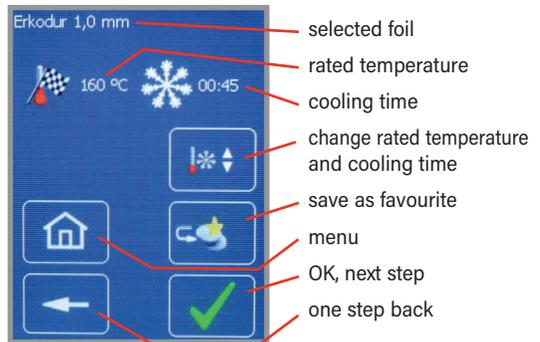
Thumb list of foils:

back continue menu

4. Selected foil



Functions of this display

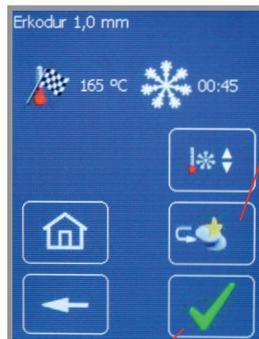
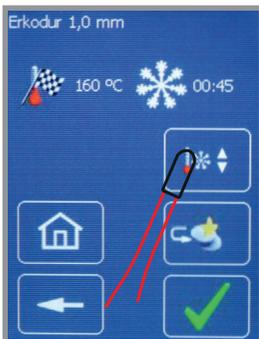


Change factory settings for a foil: The rated temperature and the cooling time can be changed for one single thermoforming process or constantly, in the latter case as favourite. The rated temperature (factory setting) can be only be changed by +/- 5 °C. The changes are made in the window „selected foil“ or „favourite“, please also see “select foil” and “save favourites”.

1. Select change

2. Change rated temperature and cooling time

3. Thermoform or ...



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

Abort

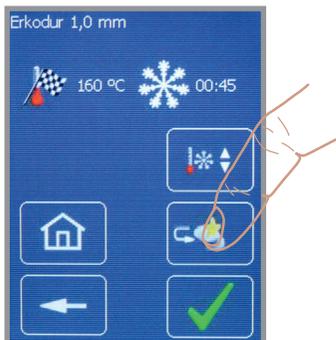
Save

Thermoform one time with the changed data.

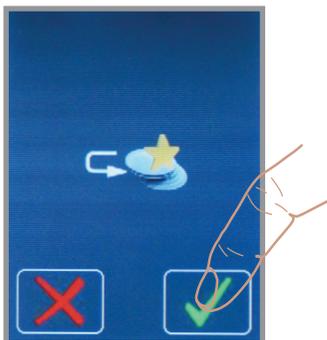
Save favourites: The list of favourites allows a quicker selection of often used foils. To save a foil in the list of favourites, this foil is selected out of the list of foils as described under "select foil". New foils, either future Erkodent foils or foreign foils, are entered with the functional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

After the desired foil is selected from the list of foils, the display shown at point 1. will be visible. To save the foil as favourite, select »to favourites«.

1. Select add favourite



2. Add favourite and confirm

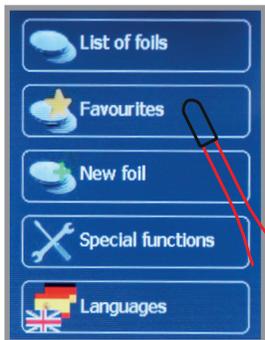


3. The favourite appears and can be processed



Delete favourite:

1. Select favourites



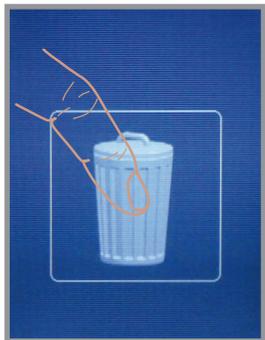
2. Select favourite



3. Select delete favourites



4. Confirm delete favourite



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

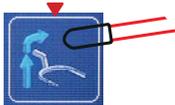


Thermoforming (Pay attention to the notes)

1. Selected foil



to 1. Correct foil?, if yes, confirm. In the display further working steps are indicated. The visualisation disappears with the next step. If necessary, move support for foil frame in the upper position.



Put the selected foil in the foil reception and clamp with the foil securing ring.



Now or during the heating process embed the model in the granules.



Push form pot with model backwards into the unit until it clicks into place.



2. Foil will be heated



to 2. Place foil reception with foil onto the insertion ramp and push it thus far under the heater that it clicks into place.



The foil temperature appears in the display, the foil is heated.

The function 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., otherwise the heating process will be stopped), the working steps described under "to 1." appear again in the display.

When the rated temperature is reached, the heating switches off.

3. Attention, thermoforming process



to 3. 10 °C before reaching the rated temperature, a signal sounds and a warning sign flashes. As soon as the rating temperature is reached, the thermoforming process will be automatically released.

Do not reach into the unit!



Risk of crushing! Risk of serious injuries

Notes:

The function field »X« interrupts the respective process. Each termination has to be confirmed.



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

4. Cooling time



to 4. After thermoforming the cooling time runs. Afterwards further working steps are indicated on the display.

Pull form pot out of the unit, in doing so the red protection shield moves upwards.



Take model and foil out of the foil reception.



error 001: blocked support for foil reception, see page 11

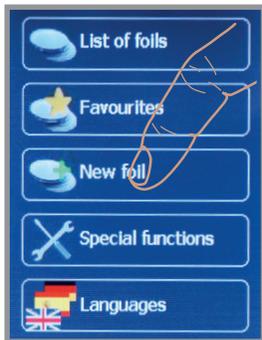
Enter new foil: New foils can be future Erkodent foils or foreign foils.

If Erkodent launches a new foil the necessary data will be found on the label (example: Erko new, thickness 1.8 mm, rated temperature 150 °C, cooling time 1:40 min.).

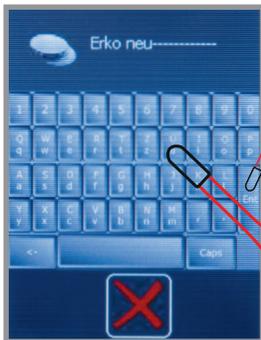
The foil will be saved under input »New foil«. In case of foreign foils the rated temperature and cooling time have to be determined using the special functions (page 9). The new foils can be saved in the list of favourites and selected via this list.

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

1. Select New foil



2. Enter foil name



3. Enter foil thickness



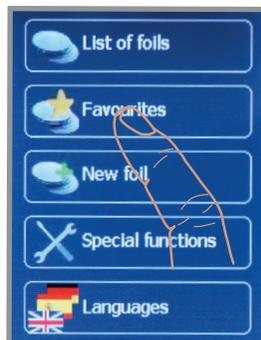
4. Enter rated temperature



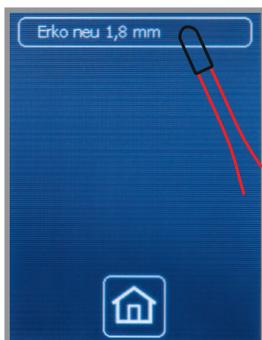
5. Enter cooling time



6. Select favourites



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 the heating on and off independently of the program.

To determine the rated temperature (thermoforming temperature) of a foreign foil, select »heating on« and clamp the foil in the foil frame as described at "thermoforming". As soon as the foil frame clicks into place under the heater (illustrations), the heater switches on and the sensor measures the temperature of the foil. If afterwards the foil shall be thermoformed, select »START« to initiate the thermoforming process.

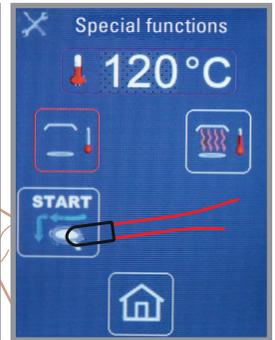
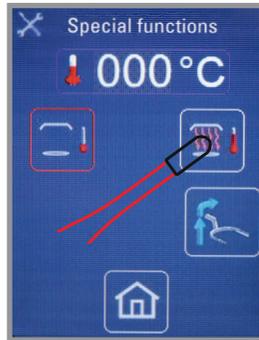


1. Select special functions

If necessary, move support for foil reception in the upper position.

2. Select heating on

3. Rated temperature reached, select START



No information in regard to rated temperature and cooling time is available:

To check the thermoformability, pull the foil out and touch with a blunt instrument. If permanent impressions result, generally the foil is ready for thermoforming (illustration).

The heating switches off if the foil is pulled out of the heating area, »heating out« is selected or if the sensor measures >240 °C. The temperature shown on the display is the temperature measured at last. If the foil is thermoformable, this temperature corresponds to the rated temperature.



To determine the cooling time, stop the time from beginning of the adaptation. For the first time after approx. 1 minute select cooling time »STOP«, the cylinder moves upwards, the foil can be pulled out. Manually check the foil temperature, **attention risk of burning!** The right cooling time is achieved if the foil has approx. room temperature on the surface. The foil can now be saved as described under "enter new foils".



Maintenance:

- To ensure that the unit maintains its full function, the rubber seals require replacing at least once a year when the unit is permanently in use. The new sealing rings should be firmly pushed into position.
- Extremely dirty high-grade steel granules should be purified or replaced.
- **The air discharge apertures at the side of the model pot and the slots in the model disc must not be blocked.**



**Maintenance
Erkopress_motion**

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

To release water open the screw.



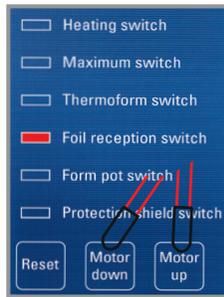
Sealing cylinder
110 857



Sealing foil securing ring
110 857

Troubleshooting: The »HELP« key appears on the display in the case of Error 001/002/003/004 and 021.

Example, **Error 001:** blocked support for foil reception in the travel path downwards (motor switches off).



Drive support for foil reception step by step downwards (motor down) or upwards (motor up) in the respective end position. (Several times press touch fields)

Example: red light up, position switch is switched on.

Error message:	possible cause:	possible elimination:
Error 002: Disorder protection shield, microswitch not reached or actuated.	The support for the foil reception has not moved down the red protection shield.	Make sure that the foil reception is snapped into place, push it completely into the unit, otherwise CS*.
Error 003: Microswitch for form pot not operated	Form pot position changed during thermoforming/switch defective.	Do not pull out the form pot during the thermoforming process/CS*.
Error 004: Heating position switch not reached.	When the support for foil reception is raised, the heating position switch is not reached/switch defective.	See Error 001, »Heating switch« must light up/CS*.
Error 010: Program abort (timeout foil reception)	Foil reception was not in the heating position for more than 10 sec. during heating.	The foil reception must be pulled out only briefly and must be pushed back into place within 10 seconds.
Error 011: Program abort (timeout form pot)	The form pot was not in the thermoforming position for more than 10 sec. at the end of the heating time.	The form pot must be in the rearmost, locked position for the thermoforming process. If not, the program is aborted after 10 sec.
Error 021: Disorder of the temperature measurement	Heating was for longer than 10 min. in operation/IR temperature sensor defective.	After 10 minutes of heating, the heater switches off for safety reasons / CS*.
only Erkopress ci_motion	Compressor needs longer than 90 seconds to build enough pressure, pressure system untight.	Check compressed air system, CS*.
Error 031: Runtime of compressor too long.		



Troubleshooting:

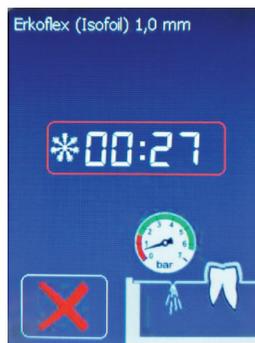
Error	Possible cause:	Possible elimination:
Machine not ready to use, no display in the touch panel	Power supply defective, room temperature below 15 °C	Check wall socket, machine plug, fuses, operating temperature > 15 °C.
Heater does not start	Foil reception not locked under the heating	Check position of the foil reception.
Pressure cylinder does not, or incompletely extend	Protection shield not extended	Foil reception must be in the rearmost, locked position, or CS (Customer Service).
	Form pot is not in the rearmost position	Push form pot with model backwards into the unit until it clicks into place.
	Not enough pressure (Erkpress __motion)	System pressure at least 6 bar, pressure line with min. 6 mm inner diameter, without creases.
Pressure cylinder does not seal (blowing sound)	Worn sealings	Replace sealings
	Not enough pressure (Erkpress __motion)	System pressure at least 6 bar, pressure line with min. 6 mm inner diameter, without creases.
Program reacts absurdly	System crash	Restart, switch machine off for 30 sec. and switch on again.
Absurd temperature indication	Sensor window soiled, draught disturbs the sensor, sensor defective	Clean sensor window, avoid draught near the unit, if necessary CS sensor check.
Adaptation not sufficient	Granules on sealings	Remove granules from the sealings.
	Sealings used	Replace sealings
	Hole in the foil	Remove the sharp edges on the model, embed the model deeper, if necessary choose thicker foil material.
	System pressure too low	System pressure at least 6 bar, pressure line with min. 6 mm inner diameter, without creases.

Note, only Erkpress ci motion:

When processing thin flexible foils, holes may form in the foil. If the pressure drops below 1.5 bar, this will be displayed.

Do not interrupt the thermoforming process! A good thermoforming result is most likely.

Display pressure loss:



Delivery form for Erkopress _motion / ci_motion

please check concerning completeness

piece:	article:	order number:
1	Erkopress <u>_motion</u> with pressure regulator / water separator	173 000
1	Erkopress <u>ci_motion</u> with integrated compressor and reserve compressed air	173 500

with accessories as follows:

1	foil securing ring	173 050
1	foil reception	173 023
1	granules collecting device	173 025
1	model disc	173 027
1	form pot	173 021
1	brush for filling granules with rubber cap 188 530 can also be used as input pen (in the foil trial package)	
1	on-off Magnet red 110 890 to collect filling granules (in the foil trial package)	
1	filling granules (subsequent supply) 110 852 (1.3 kg) (supplied with the unit 1.8 kg) high-grade steel granules (magnetique) with rounded edges	
1	worktray white 222 100	
1	power supply cable 170 001	
1	compressed air connection hose 660 451	
1	foil trial package including list of contents	
1	machine documents (folder), instructions, thermoforming technique manual, material card, Erkodent program, guarantee card	





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