PLATE PROCESSORS

USER MANUAL

InterPlater 66/88

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GENERAL INFORMATION

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The manual was written and illustrated using the best possible information available at the time of publication. Any differences between the manual and the equipment reflect improvements introduced after the publication of the manual.
Changes, technical inaccuracies, and typographic errors will be corrected in subsequent editions.

IMPORTANT!

- Intended use of equipment: Development of positive and negative offset plates.
- Installation, service and repair must be performed only by authorized personnel trained to carry out plumbing and electrical installations.
- It is the responsibility of the owner and operator/s of this machine, that the installation is made in accordance with local regulations.
  The manufacturer cannot be held responsible for any damage caused by incorrect installation, service or repair of this machine.
- Observe technical data from the nameplate (located on the backside left underneath the exit table).
- The noise emmision of the equipment is below 70 dB(A).

NOTES!

Throughout the manual notes are written in bold on a grey background like the example below:

NOTE! Charcoal filter must be washed prior to use.

Explanation:

The operator should observe and/or act according to the information in order to obtain the best possible function of the equipment.

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INTRODUCTION

The OPERATING INSTRUCTIONS contains the information that is necessary for the daily user to operate, clean and maintain the equipment.

The OPERATING INSTRUCTIONS is available in an English, German, French, Spanish, Italian, Greek, Dutch, Finnish, Portuguese and Danish version.

NOTE! Always keep the OPERATING INSTRUCTIONS together with the machine.

SAFETY INSTRUCTIONS

Personnel operating and maintaining the machine must be familiar with all aspects of its operation and be proficient in maintenance.
Such personnel should review the following precautions to promote safety awareness.

GENERAL

Wear safety glasses and gloves when maintaining or servicing the equipment.
Do not wear a necktie, jewelry, or loose-fitting clothing while operating the machine.

ELECTRICAL

All electrical matters must be dealt with by qualified service technicians.

MECHANICAL

Keep hands, fingers and tools clear of moving parts.
Install all panels and covers after servicing.

CHEMICAL

Always refer to first aid recommendations provided by the chemical manufacturer.
Wear eye protection and special clothing such as an apron and gloves when handling chemicals.
In case of chemical contact with eyes or skin, immediately flush affected area with plenty of fresh water for 15 minutes. Wash affected clothing.
In case of ingestion, contact a physician immediately.
Do not mix chemicals.
Shut off water supply and reduce system pressure before disconnecting plumbing fixtures.
Provide adequate ventilation; avoid prolonged breathing of solution vapours.
Avoid splashing and spilling.
(Wipe up spills immediately).

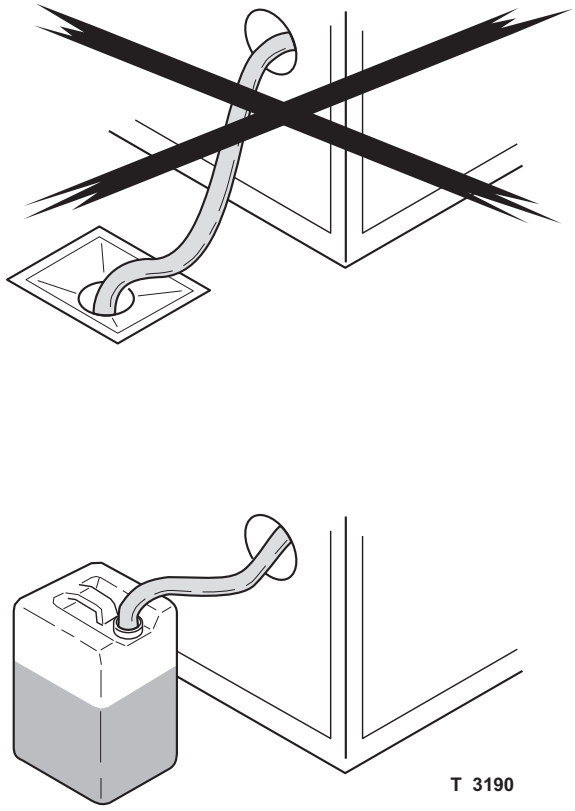
ENVIRONMENTAL PROTECTION

DISPOSAL OF CHEMICALS

Most chemicals used in plate processors are strong pollutants and **do not** belong in the public sewer system.
Therefore chemicals must be led to waste containers in order to protect the environment.

Many countries have strong regulations on this subject, and disposal of containers with waste chemicals must be made according to these regulations. Refer to local authorities for information regarding disposal of waste chemicals.

Contact your supplier of chemicals if you need more information about safety and disposal.



DO NOT LEAD CHEMICALS DOWN THE DRAIN!

GENERAL ABOUT PLATE PROCESSORS

The new range of plate processors are designed to provide rapid processing of singlesided negative or positive offset plates.

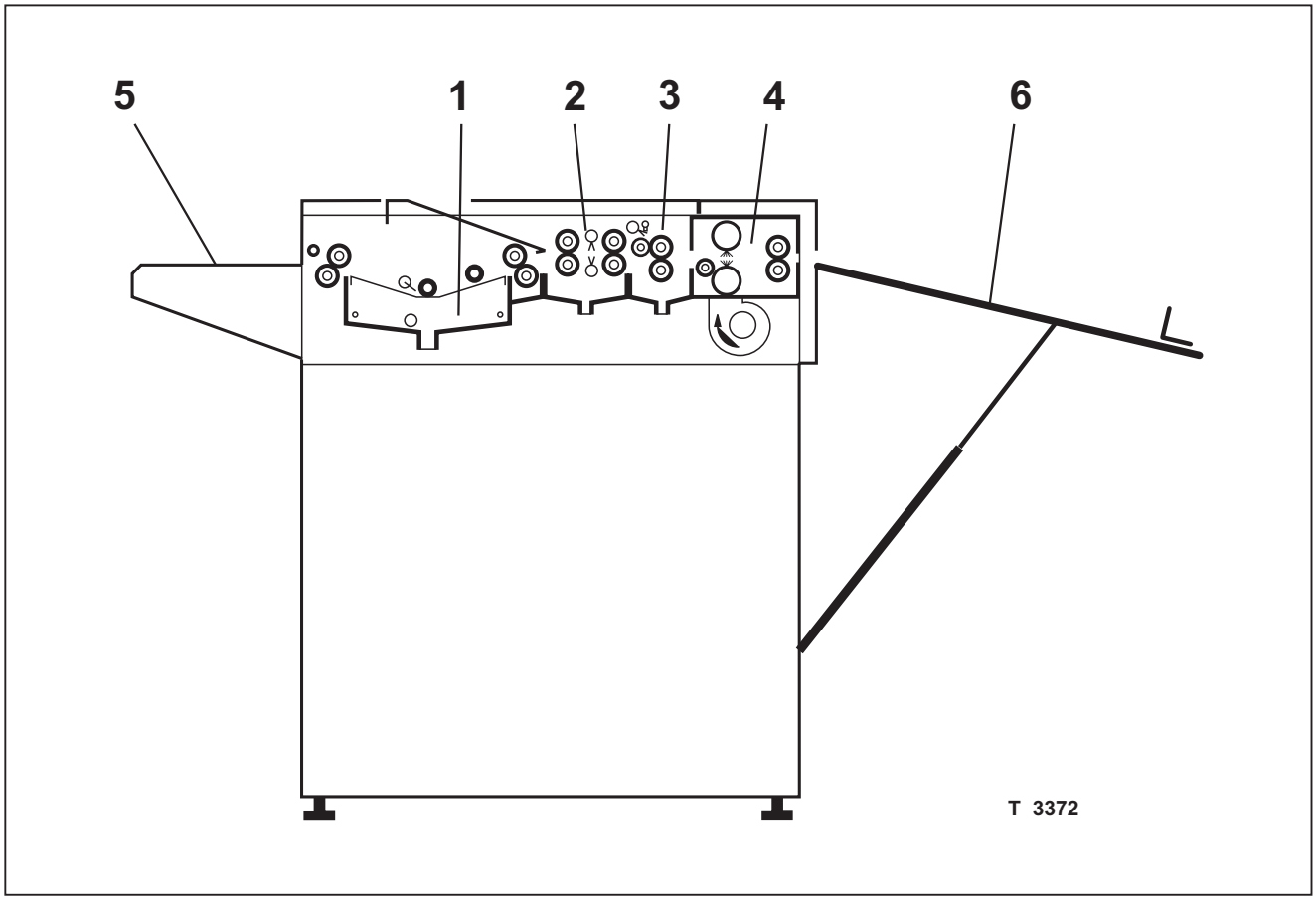
In principle all processors are designed with 4 major sections (see illustration below): DEVELOPER (1), WASH (2), GUM (3), and DRYER (4). Each section performs a basic function to change the exposed plate into a fully developed and dry plate, ready for handling.

The plate material is fed into the machine from the feed-table (5). At this stage the machine normally is in “STAND-BY” mode, but activating the input sensor(s) makes the machine start up in “PROCES” mode. The different modes are described later in this manual.

When the plate is fed into the processor, the transport roller system takes over and leads it safely and smoothly through each of the four sections. Shortly after the plate material has left the machine and has landed on the exit table (6), the machine returns to “STAND-BY” mode.

To maintain a good performance and processing quality it is necessary to renew the developer at intervals depending on the type of material you are processing.

Also the temperature of the developer and the transport speed of the material has a great influence on the processing result.

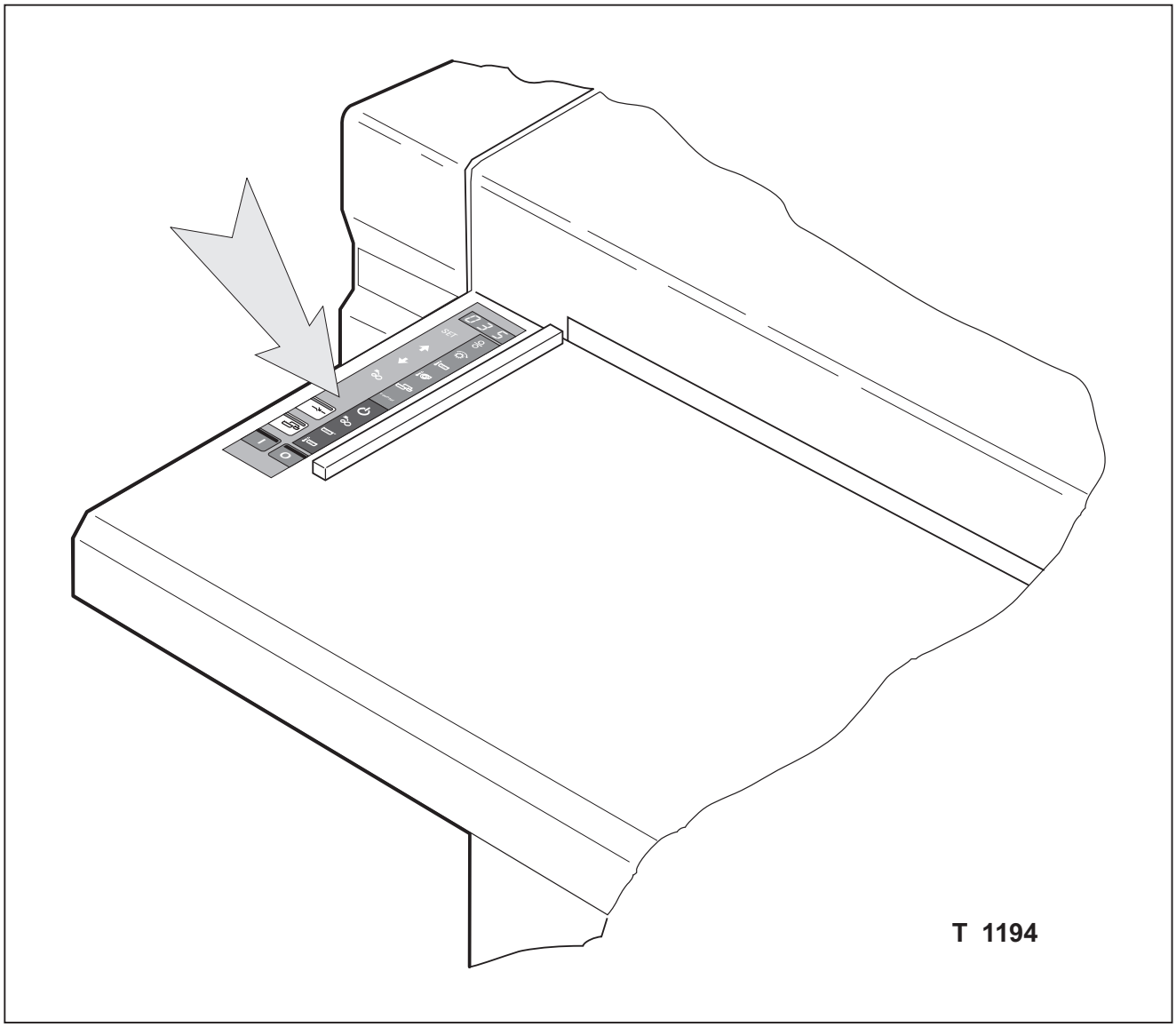


THE CONTROL PANEL

The operation of the processor is controlled from the Control Panel built into the left side of the feed-table.

The Control Panel holds buttons and indicator lamps for all the main processor functions, buttons for setting of the various speeds and temperatures of the system, and a display showing the set values.

The functions of the Control Panel lamps and buttons are described on the next pages.



ON-BUTTON (1)

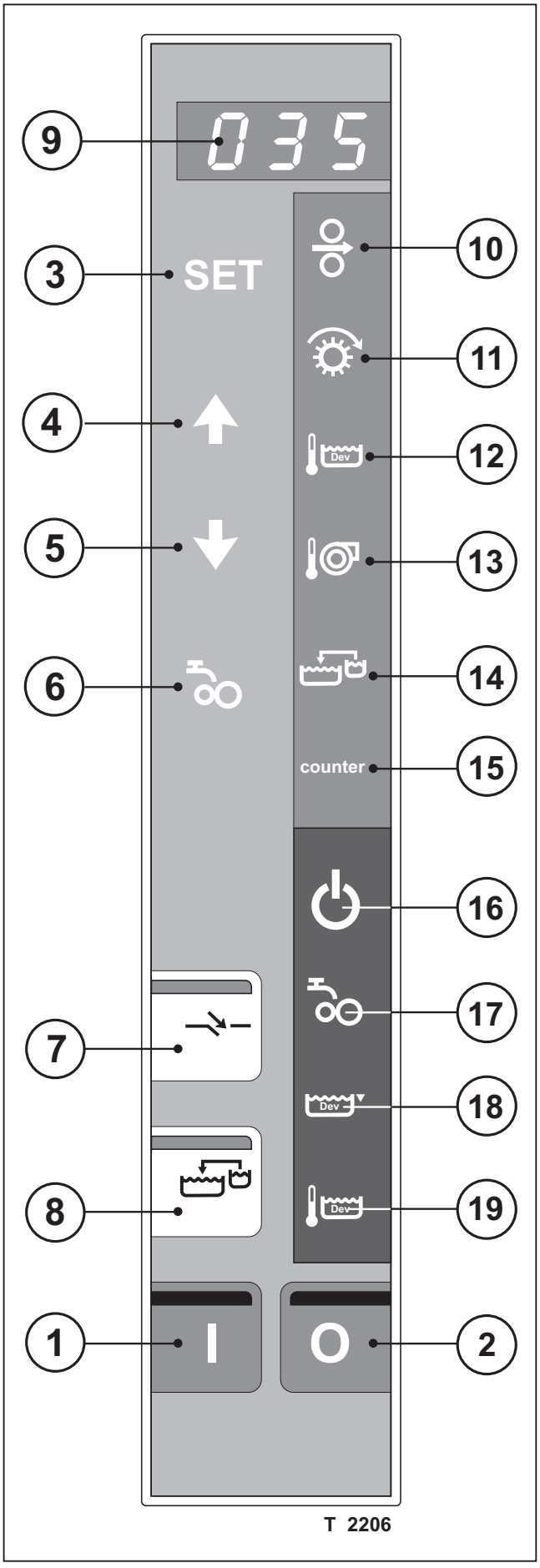
(Lamp built-in).
Switches the processor from “OFF” mode into “STAND-BY” mode provided that the main switch underneath the feed table is switched ON.
When the processor is on, the built-in lamp is lit.

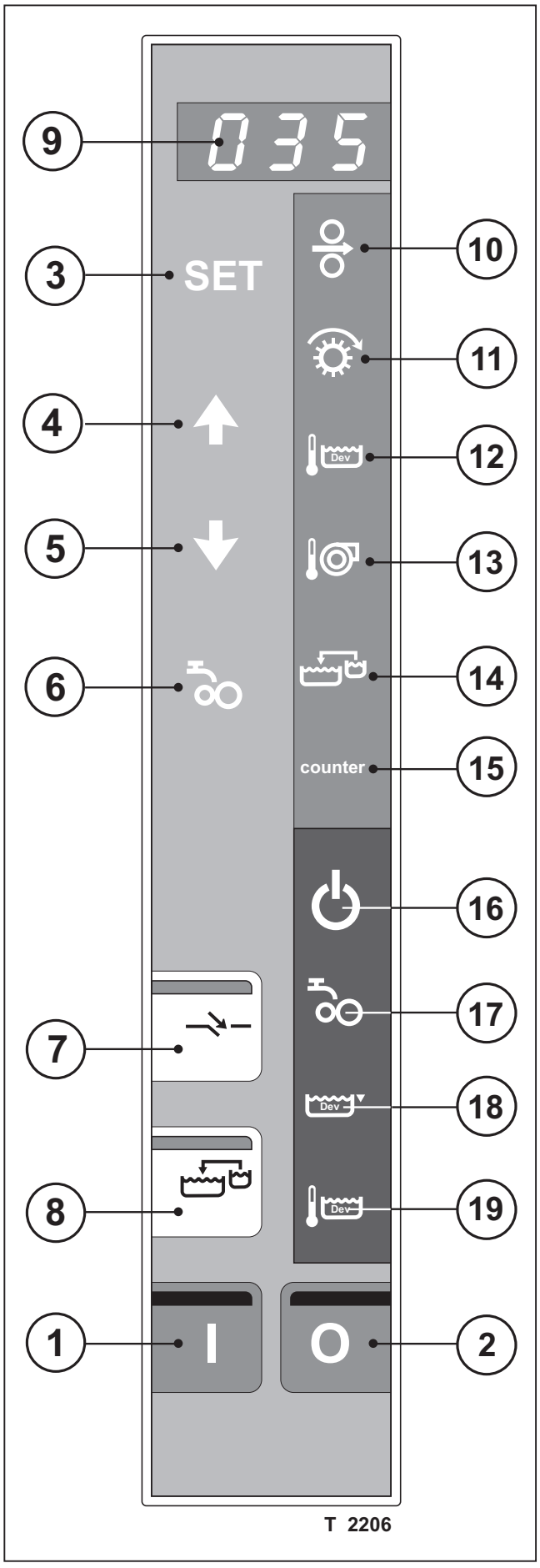
OFF-BUTTON (2)

(Lamp built-in).
This button switches the machine from “STAND-BY” mode into “OFF” mode. When the processor is off only the built-in lamp is lit.

“SET” BUTTON (3)

The “SET” button makes it possible to change the value in one of the processing parameters:
The lamp for the selected processing parameter (10-15) is lit. Use the selection buttons (4) and (5) to select the processing parameter in which the value has to be changed. Push the “SET” button and the selected processing parameter lamp (10-15) will start to flash.
Adjust the value using the selection buttons (4) & (5) and push the “SET” button again to confirm the new setting.





SELECTION BUTTONS (4) & (5)

Use the selection buttons to select the processor parameter to be displayed or changed. The lamp for the selected processing parameter (10-15) will light up. When changing a value in a processing parameter use the buttons to increase or decrease the value.
See also description for “SET” button (3).

“GUM-RINSE” BUTTON (6)

Push the button and hold it for 3 secs. The “GUM-RINSE” program will start, the “GUM-RINSE” lamp (17) and the “WAIT” lamp (16) will start to flash asynchronously, which means that the “WAIT” lamp is on when the “GUM-RINSE” lamp is off and opposite. The rest of the display is off except for the “ON” lamp (1).
When the rinsing part of the program is finished the “ON” lamp (1) turns off and the “OFF” lamp (2) starts to flash indicating that the gum section is being emptied.
After 1 min. the processor automatically switches to “OFF” mode.

NOTE! If “GUM-RINSE” program is not executed according to description above you may get problems with water entering the gum-system.

“REWASH” BUTTON (7)

To start the “REWASH” function press this button. The built-in lamp flashes for 2 secs. and is then lit constantly. The wash, gum and dryer functions start while the replenishment system remains deactivated. If the plate has not been entered for rewashing within 15 seconds after the “REWASH” button has been pushed the “WAIT” lamp will be lit indicating that the “REWASH” button must be pushed again before the plate is inserted.
The duration of the rewash process depends of the speed. When the rewashing is finished, the processor returns to “STAND-BY” mode and the “REWASH” and “WAIT” lamps turn off.

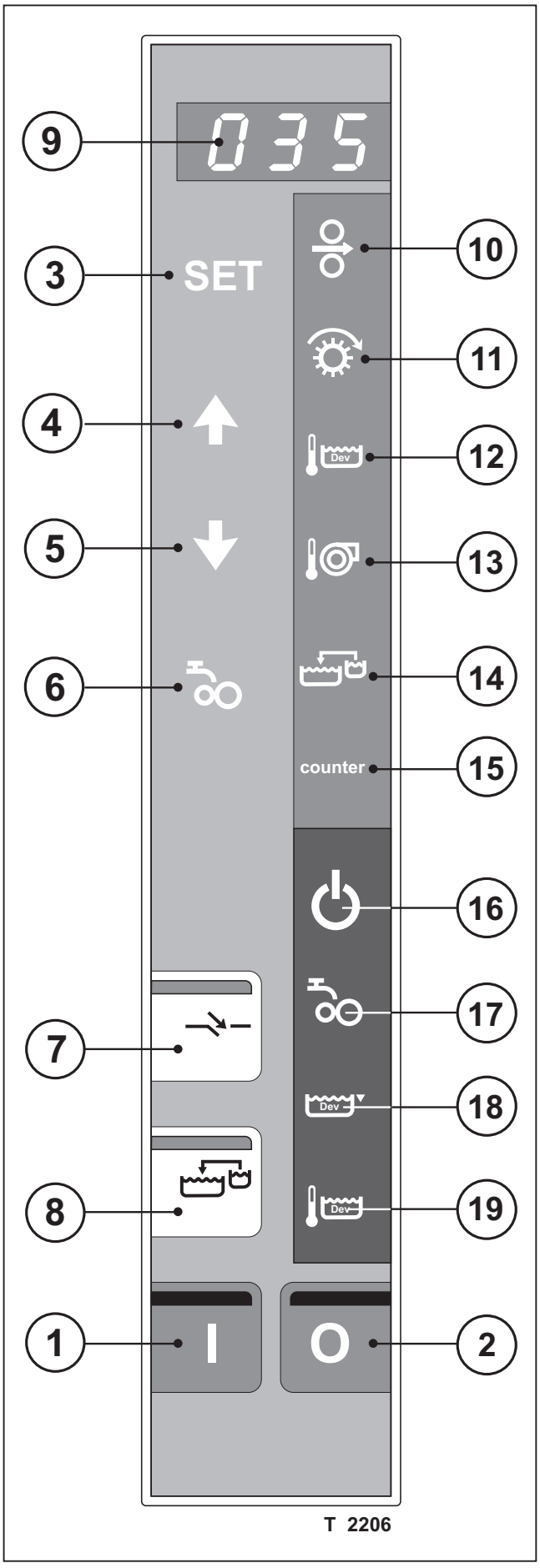
NOTE! The “REWASH” button must be pressed once for each plate that is entered for rewashing and regumming. This is to reset the timer function.

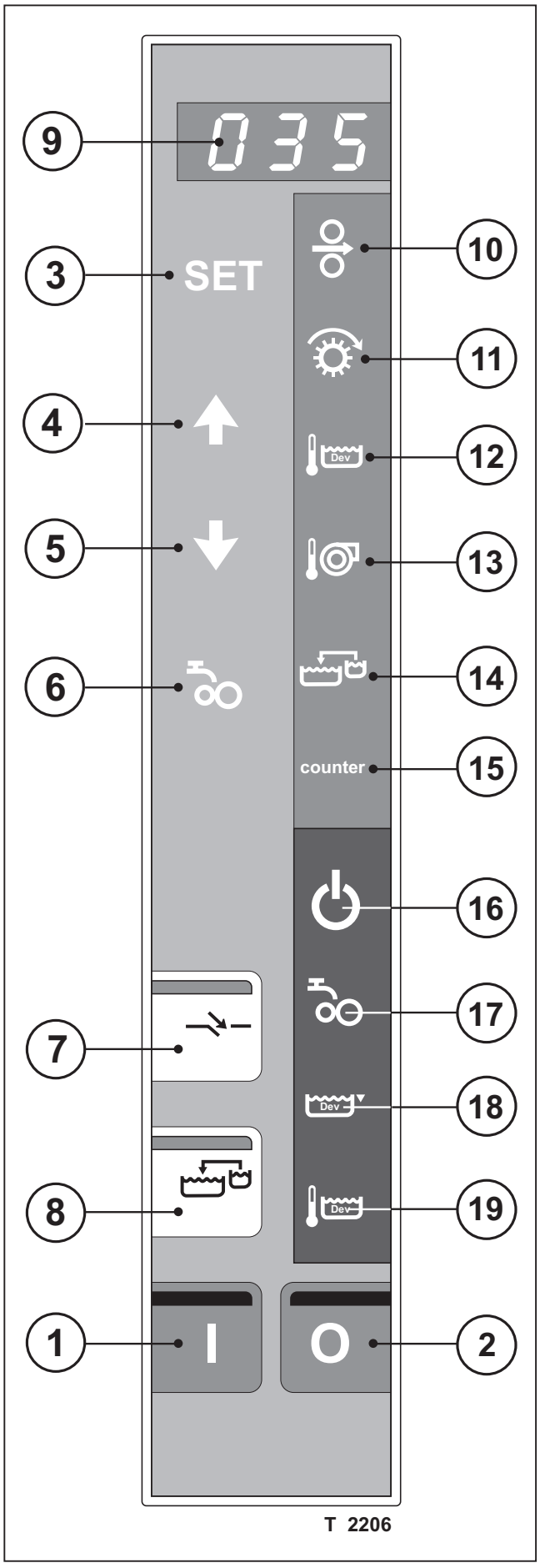
To exit the “REWASH” program manually push the “REWASH” button for 2 secs. until the built-in lamp turns off. The processor stops and returns to “STAND-BY” mode.

“REPLENISHMENT” BUTTON (8)

If low level is detected in the developer section (“WAIT” lamp (16) and “LOW LEVEL” lamp (18) lit), refill the bath by pressing this button to activate the developer replenishment pump. The built-in lamp is lit while the replenishment pump runs, either when pressing this button and/or when controlled by the automatic replenishment system.

NOTE! If the developer bath is empty, it should be filled from suitable containers as it is quite time-consuming to fill it by using the pump.





DIGITAL DISPLAY (9)

The display shows the values for the different functions. During proces the display will always show the default processing parameter. The default processing parameter is selected in parameter 3. If another function has been selected, the display returns to show the default processing parameter shortly after.

PLATE SPEED (10)

Indicator for plate speed function.
When selected the displays shows the set plate speed in cm/min. (inch/min.).

BRUSH SPEED (11)

Indicator for brush speed function.
When selected the displays shows the set brush speed in rpm.

DEVELOPER TEMPERATURE (12)

Indicator for developer temperature function.
When selected the displays shows the set developer temperature in °C (°F).

DRYER TEMPERATURE (13)

Indicator for dryer temperature function.
When selected the displays shows the set dryer temperature in °C (°F).

DEVELOPER REPLENISHMENT RATE (14)

Indicator for developer replenishment function.
When selected the displays shows the set plate width in cm (inch).
Use this function in conjunction with the PAR 32 to obtain the best and necessary replenishment.
If necessary, the values should be readjusted once the correct amount of replenishment for a certain plate/developer combination has been found.

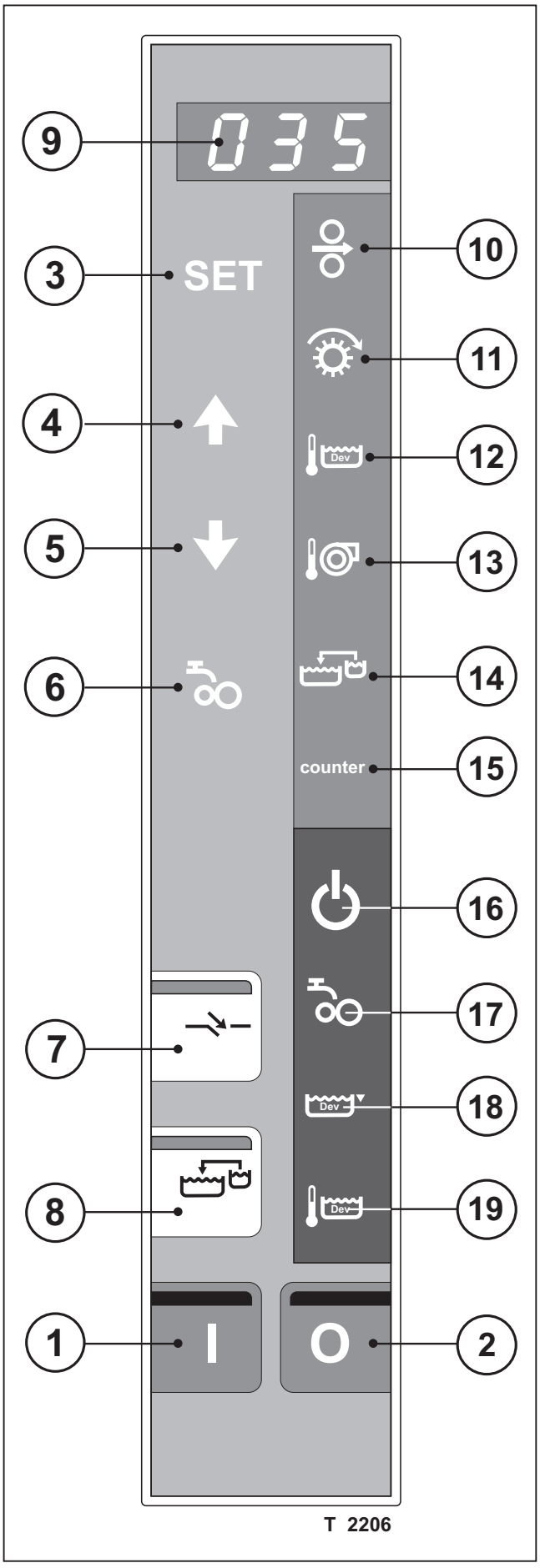
COUNTER (15)

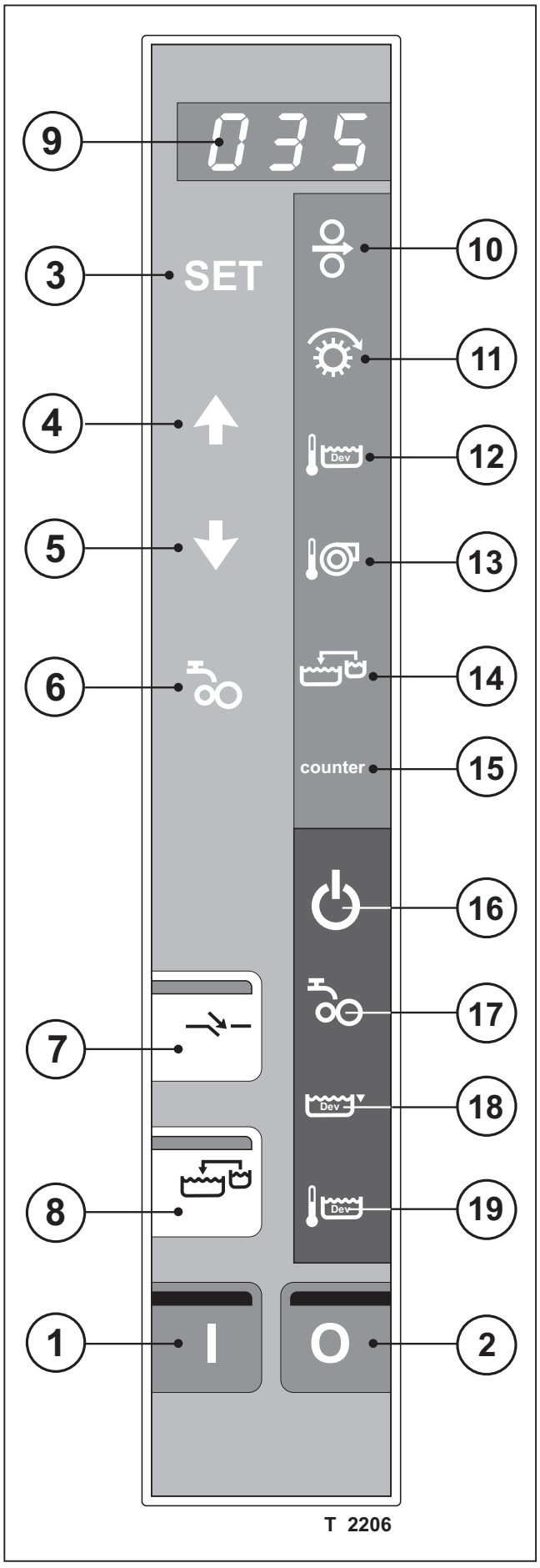
The counter function makes it possible to check the number of jobs processed in the machine, as it counts every activation of the input sensor(s).
The “SET” button (3) resets the counter, but only when the counter function has been selected using the Selection buttons (4 & 5) (indicator lamp lit).
Use the value in PAR 05 to select the display factor for the counter.

“WAIT” (16)

This indicator is l**it constantly** if any of the following situations occur:
Low level in developer section.
Developer temperature out of range.
Plate feed sensor(s) activated.

and it **flashes** (asynchronously with “GUM-RINSE” lamp (17)) when
“GUM-RINSE” program runs.





“GUM-RINSE” (17)

This indicator flashes (asynchronously with “WAIT” lamp (16)) when “GUM-RINSE” program runs.

“LOW LEVEL” (18)

If low level is detected in the developer bath, this lamp is lit.
If automatic replenishment has been selected the replenishment pump automatically starts to reestablish the correct level. Otherwise top up to correct level manually by pressing the “REPLENISHMENT” button (8).
The circulation pump and the heating element automatically switch off until the correct level has been reestablished.

NOTE! If the developer bath is empty and has to be filled, do this from a suitable container as it is quite time-consuming to fill the tank by using the replenishment pump.

“DEV. TEMP. OUT OF RANGE” (19)

This indicator lamp is lit if the temperature in the developer bath is out of range; ‘out of range’ means that the actual temperature in the bath is ex. 2°C higher or lower than the preset value.

SWITCHES AND SENSORS

INTERLOCK SWITCH

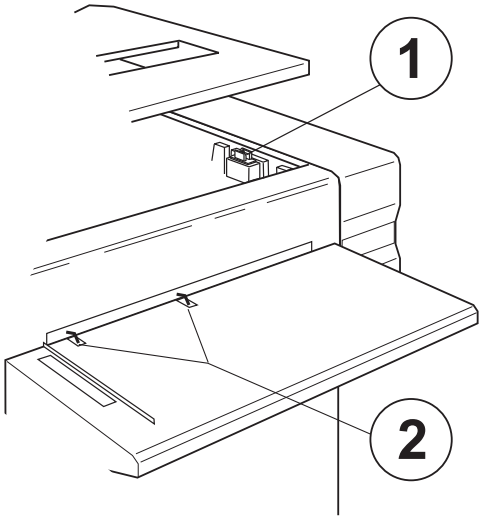
The interlock switch (1) is mounted in the right side of the tank (see illustration) and is activated by the weight of the topcover. When the topcover is lifted off e.g. for servicing, the switch turns the machine off.

INPUT SENSOR

Entering a plate activate(s) the mechanical input sensor(s) (2) built into the feed table at the processor entrance (see illustration). The input sensor(s) start(s) the processor and the “WAIT” indicator on the Control Panel is lit. The counter function counts every activation of the input sensor(s) and makes it possible to check the number of jobs processed in the machine.

MAIN SWITCH

All power to the machine is switched off when the main switch (3) is set to position “OFF”, or if the built-in thermal overload switch cuts out. The switch is located to the right underneath the feed table (see illustration).



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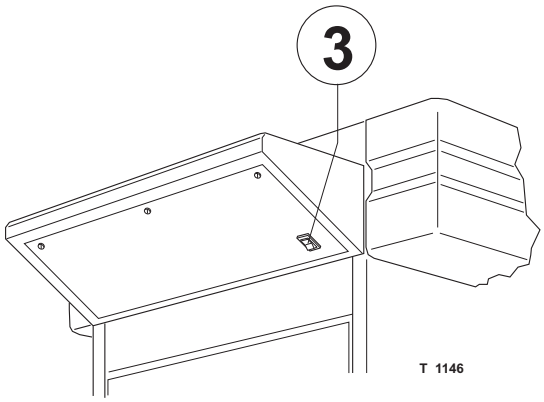

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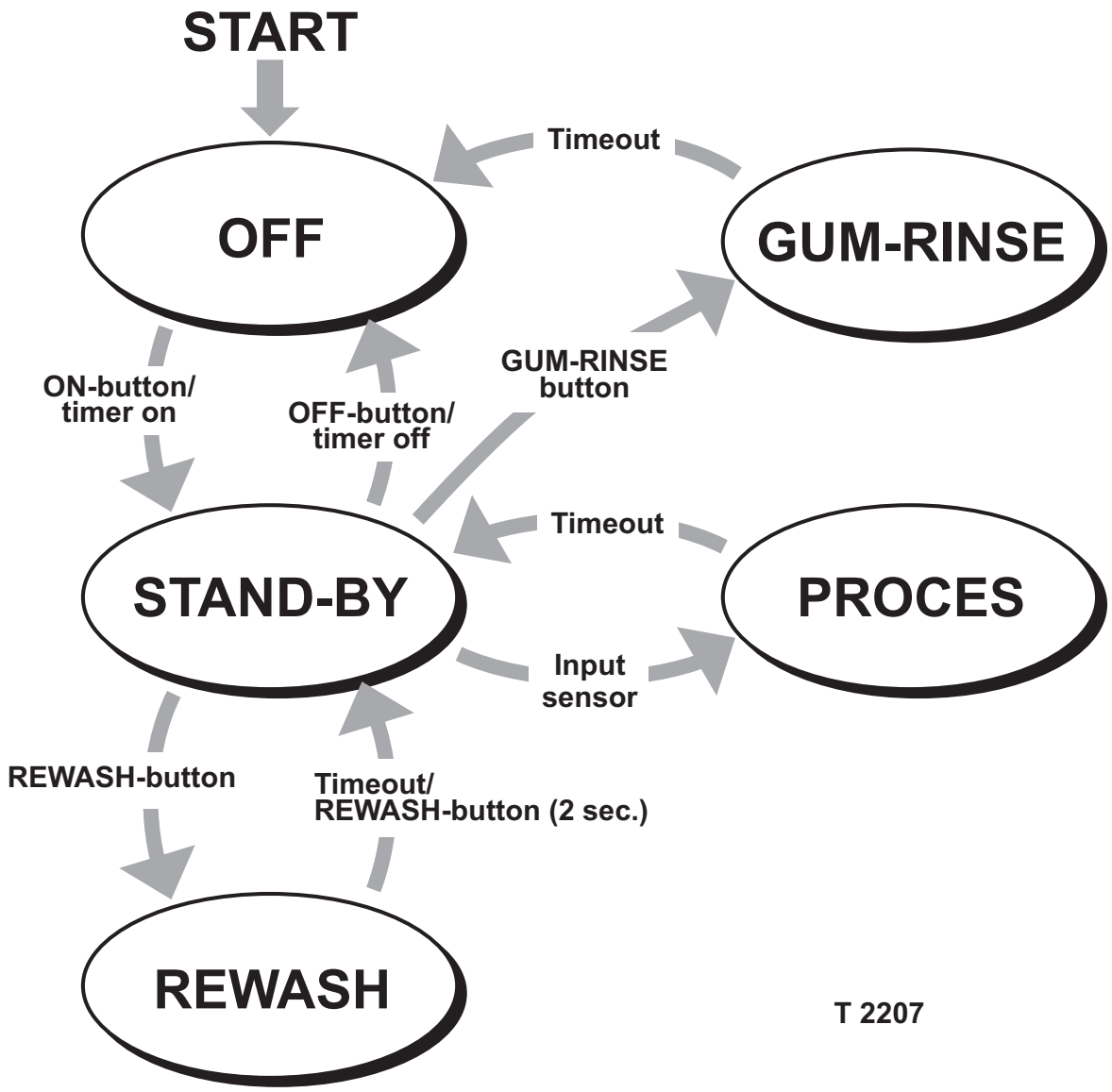
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PROCES
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REWASH-button
Timeout/
REWASH-button (2 sec.)
REWASH
T 2207

OPERATING MODES

The processor can be in one of 5 different modes (see illustration opposite):
“OFF” mode, “STAND-BY” mode, “REWASH” mode, “PROCES” mode, and “GUM-RINSE” mode.

When the main switch is switched on, the processor is automatically in “OFF” mode.

“OFF” MODE

All pumps, motors, and temperature controls are off. Control panel display is off except for the lamp in the “OFF” button.
If value in parameter 04 - “Operation mode” is set to 1 (test) the testprogram is active.

“STAND-BY” MODE

Pushing the “ON” button switches the processor into “STAND-BY” mode.
Developer temperature control is on, display is on and all processing parameters are adjustable. The lamp in the “ON” button is lit. The anticrystalisation program (parameter 7) can be switched on/off on the processorboard.

“PROCES” MODE

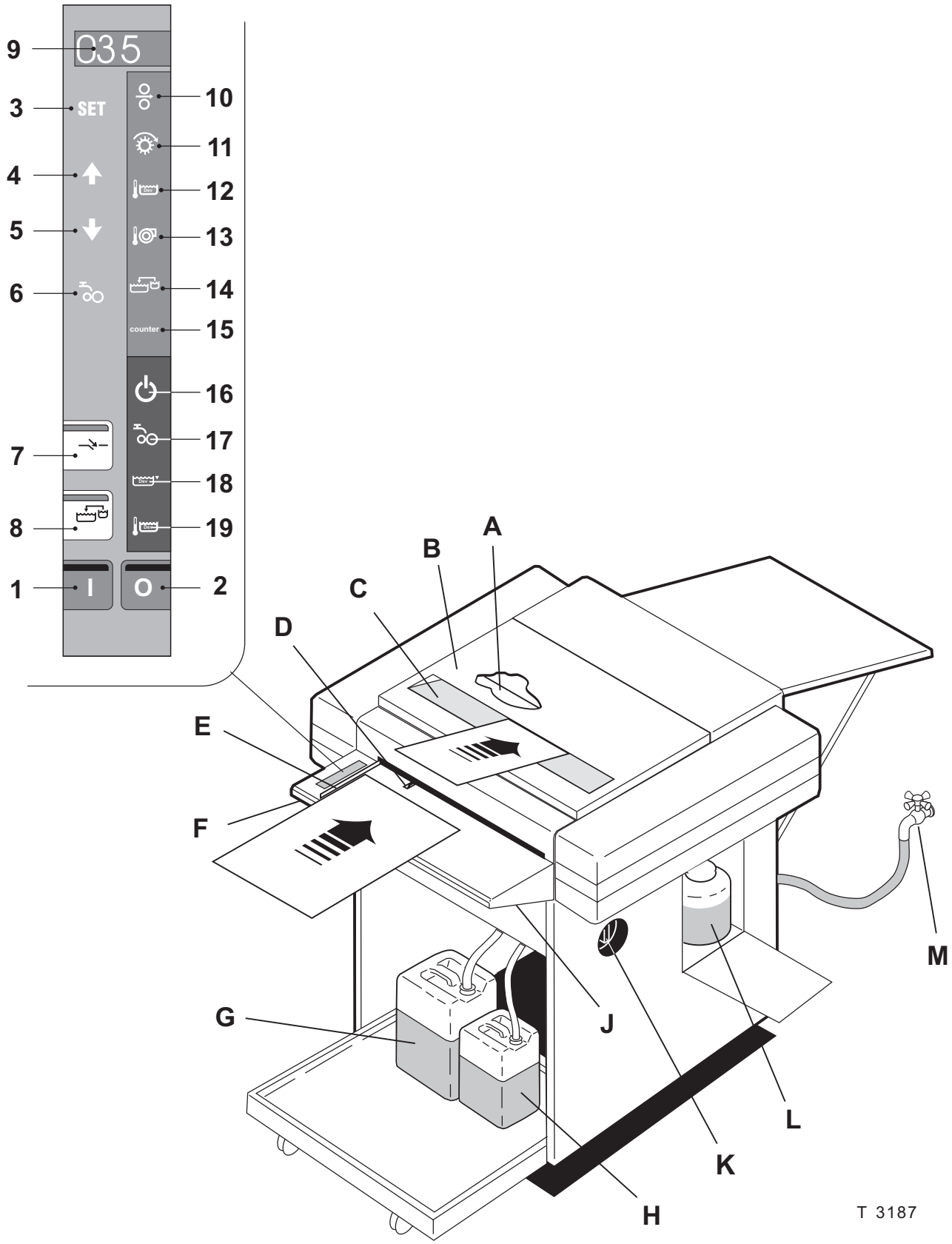
Activating an inputsensor with a plate makes the processor switch from “STAND-BY” mode into “PROCES” mode (see also description in “PROCESSING FROM THE FEED TABLE”). The processor now executes a developing program. While the program runs the display is on and the processing parameters are adjustable.
The processor automatically returns to “STAND-BY” mode shortly after the plate exits.

“REWASH” MODE

Pushing the “REWASH” button on the control panel switches the processor into “REWASH” mode. Within the next 15 secs. the operator must insert the plate into the “REWASH” slot (see also description in “USING THE REWASH SLOT”).
The processor returns to “STAND-BY” mode either automatically (timeout) or if “REWASH” button is pushed for 2 secs.

“GUM-RINSE” MODE

(See also description in “RUNNING THE GUM-RINSE PROGRAM”).
Push the “GUM-RINSE” button to start the “GUM-RINSE” program. During the program the control panel can not be used except for the “OFF” button. When the “GUM-RINSE” program is finished the processor automatically switches to “OFF” mode.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DAILY START-UP

(See illustration opposite).

Check that the developer replenishment container (H) and the gum container (L) are sufficiently filled, and that the container for waste chemicals (G) is empty.
Open the external water supply valve (M).
Turn the main switch (J) to ON.
(Underneath the feed table).

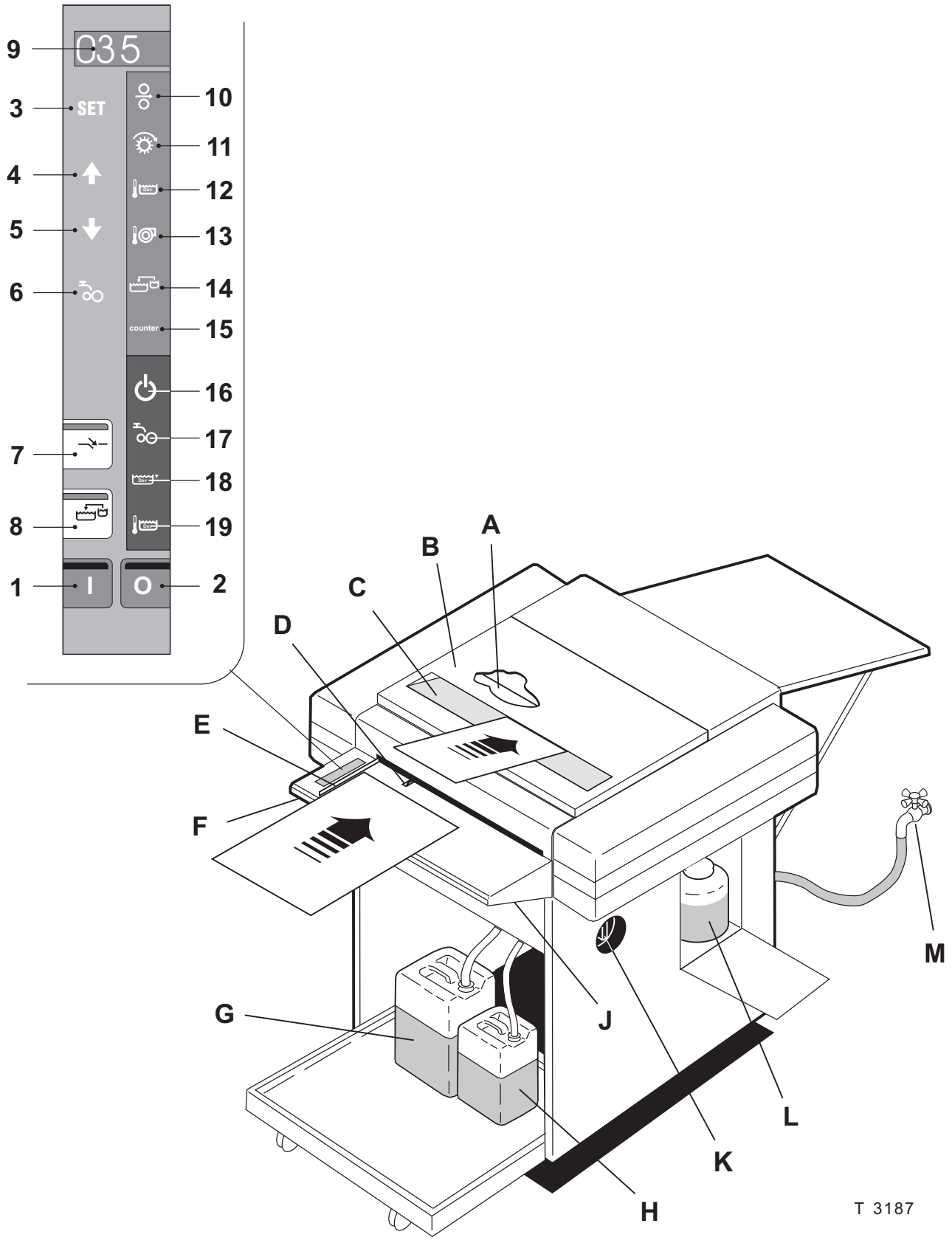
Press the ON-button (1) and verify that the built-in lamp is lit. The processor is now in “STAND-BY” mode with the rollers idling.
Make the appropriate adjustments on the Control Panel.
The “WAIT” indicator (16) will be lit until the correct level and temperature is established in the developer tank.
When the “WAIT” indicator turns off, the processor is ready for use.

PROCESSING FROM THE FEED TABLE

(See illustration opposite).

Always feed plate material from the left side of the feed table with the emulsion side upwards using the plate feed guide (E) on the table.
Feed the plate slowly into the processor until it engages the entrance rollers.
The input sensor(s) (D) switch(es) the processor into “PROCES” mode and the machine starts up with the preset speed and temperature values.

Verify that the “WAIT” indicator (16) is lit, indicating that a plate is being fed into the machine.
The “WAIT” indicator turns off shortly after the plate has left the input sensor(s). A new plate can then be inserted.
The machine returns to “STAND-BY” mode shortly after the plate has left the dryer section.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USING THE “REWASH” SLOT

(See illustration opposite).

The processor must be in “STAND-BY” mode.
Press the “REWASH” button (7). The built-in lamp will flash for 2 secs. and then light up constantly. The wash, gum and dryer functions start while the replenishment system remains deactivated.

NOTE! The plate must be entered into the rewash slot within 15 seconds after the “REWASH” button has been pushed. Otherwise the “WAIT” lamp (16) will be lit indicating that the “REWASH” button must be pushed again before the plate is inserted.

Insert the plate into the “REWASH” slot (C) with the emulsion side upwards, until it engages the drive system.

The duration of the rewash proces depends of the speed. When the rewashing is finished, the processor returns to “STAND-BY” mode and the “REWASH” lamp turns off.

NOTE! The “REWASH” button (7) must be pressed once for each plate that is entered for rewashing and regumming. This is to reset the timer function.

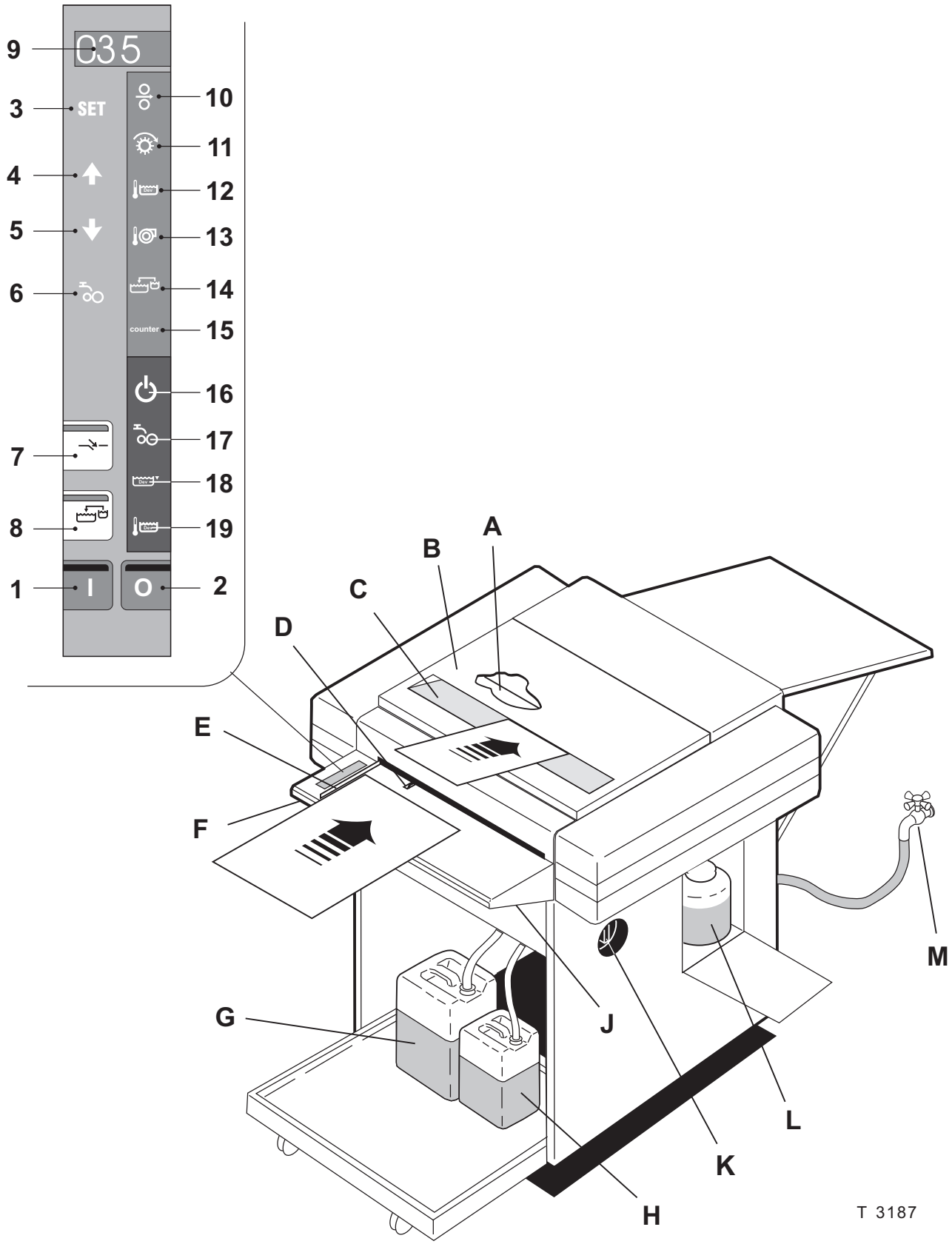
To exit the “REWASH” program manually push the “REWASH” button for 2 secs. until the built-in lamp turns off. The processor stops and returns to “STAND-BY” mode.

RUNNING THE “GUM-RINSE” PROGRAM

(See illustration opposite).

The processor must be in “STAND-BY” mode.
Press the button for the automatic gum-rinse program (6) and hold it for 3 secs.
The “GUM-RINSE” program will start, the “GUM-RINSE” lamp (17) and the “WAIT” lamp (16) will start to flash asynchronously (“WAIT” lamp is on when the “GUM-RINSE” lamp is off and opposite).
The rest of the display is off except for the “ON” lamp (1).
(To skip the “GUM-RINSE” program before time-out push the “OFF” button (2)).

When the rinsing part of the program is finished the “ON” lamp (1) turns off and the “OFF” lamp (2) starts to flash indicating that the gum section is being emptied.
After 1 min. the processor automatically switches to “OFF” mode.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SHUT-DOWN PROCEDURE

(See illustration opposite).

NOTE! The processor should only be shut down completely for holidays or for maintanance and servicing purposes.

NOTE! When shutting the machine down without running the "GUM-RINSE" program always first push the "OFF" button on the control panel.

Run the "GUM-RINSE" program (see description earlier in this manual).
Close the external water supply valve (M).
To shut down the machine completely, turn the main switch (J) to "OFF".

CLEANING AND MAINTENANCE

GENERAL

Performing cleaning and maintenance regularly reduces the chances of equipment failure and the loss of processing quality.
Only one person should be responsible for performing the preventive maintenance program. That person should be familiar with the equipment as well as its operational characteristics and maintenance requirements.

A periodic major clean-up of the equipment is essential to the maintenance of processing quality and the reliability of the machine.
This clean-up should be performed either monthly or after processing approx. 1000m2 of plate.
The major clean-up procedure can be performed in two to four hours depending on the condition of the machine and on the proficiency of the person cleaning it.

NOTE! Personnel performing any maintenance, cleaning or servicing must familiarize themselves with the safety instructions and environmental protection described on the starting pages of this manual before attempting any of these procedures.

NOTE! Be sure to disconnect electrical power before performing any cleaning or maintenance.

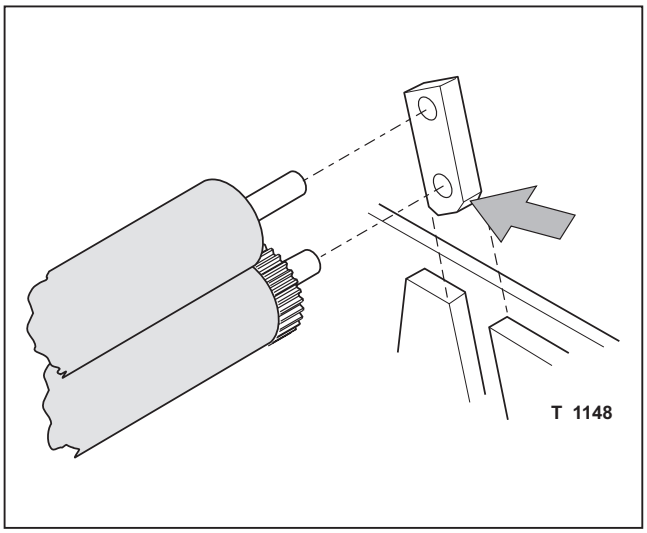
When using water for cleaning purposes use warm water 35 - 40°C (95 - 104°F).

NOTE! Do not cover the machine with a cloth or piece of plastic to protect it from dust, as this prevents free circulation around the machine and can lead to condensation and overheating.

NOTE! Never use hard tools or abrasive materials when cleaning guides and rollers.

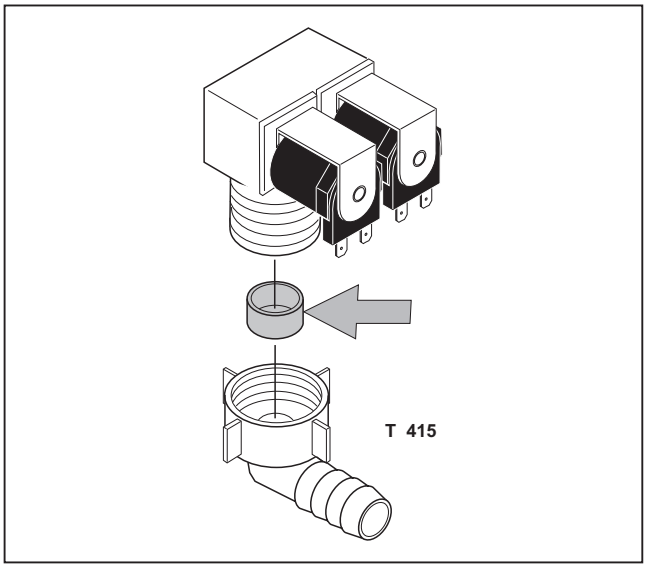
BEARING BLOCKS

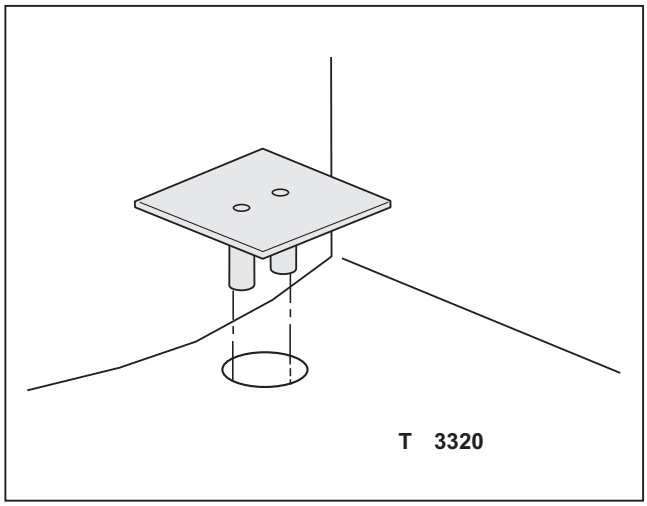
All bearing blocks are fabricated with coarse chamfers in one end. When a bearing has been rermoved from the processor for cleaning etc. it is very important for the correct function of the machine that this end is mounted downwards in the tank.



CLEANING OF THE WATER FILTER

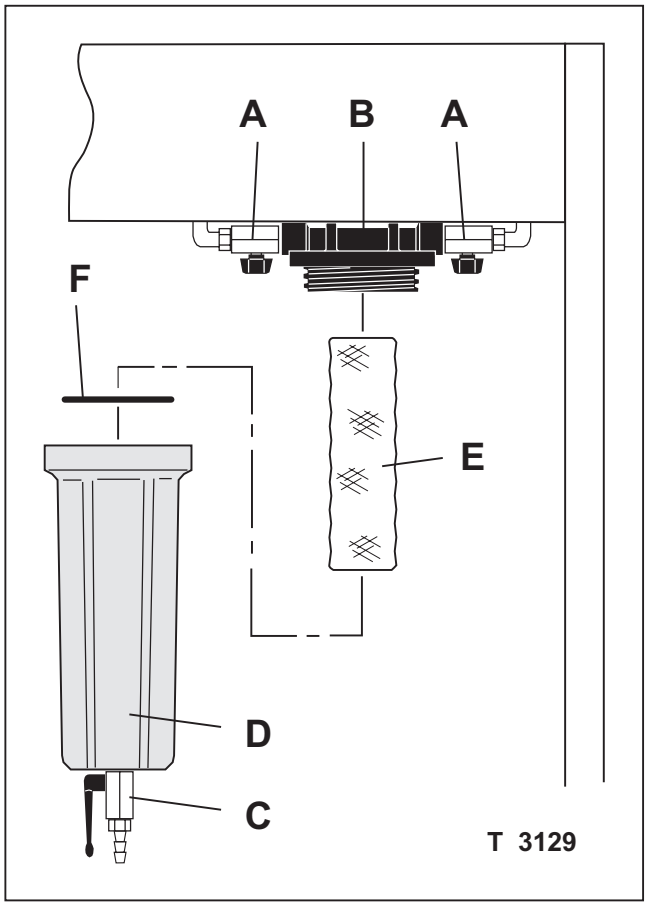
Close the external water supply valve.
Locate the water valve under the machine.
Disconnect the water supply hose from the valve by unscrewing the union nut, and remove the water filter with a pair of pliers.
Clean the filter and reinstall it.





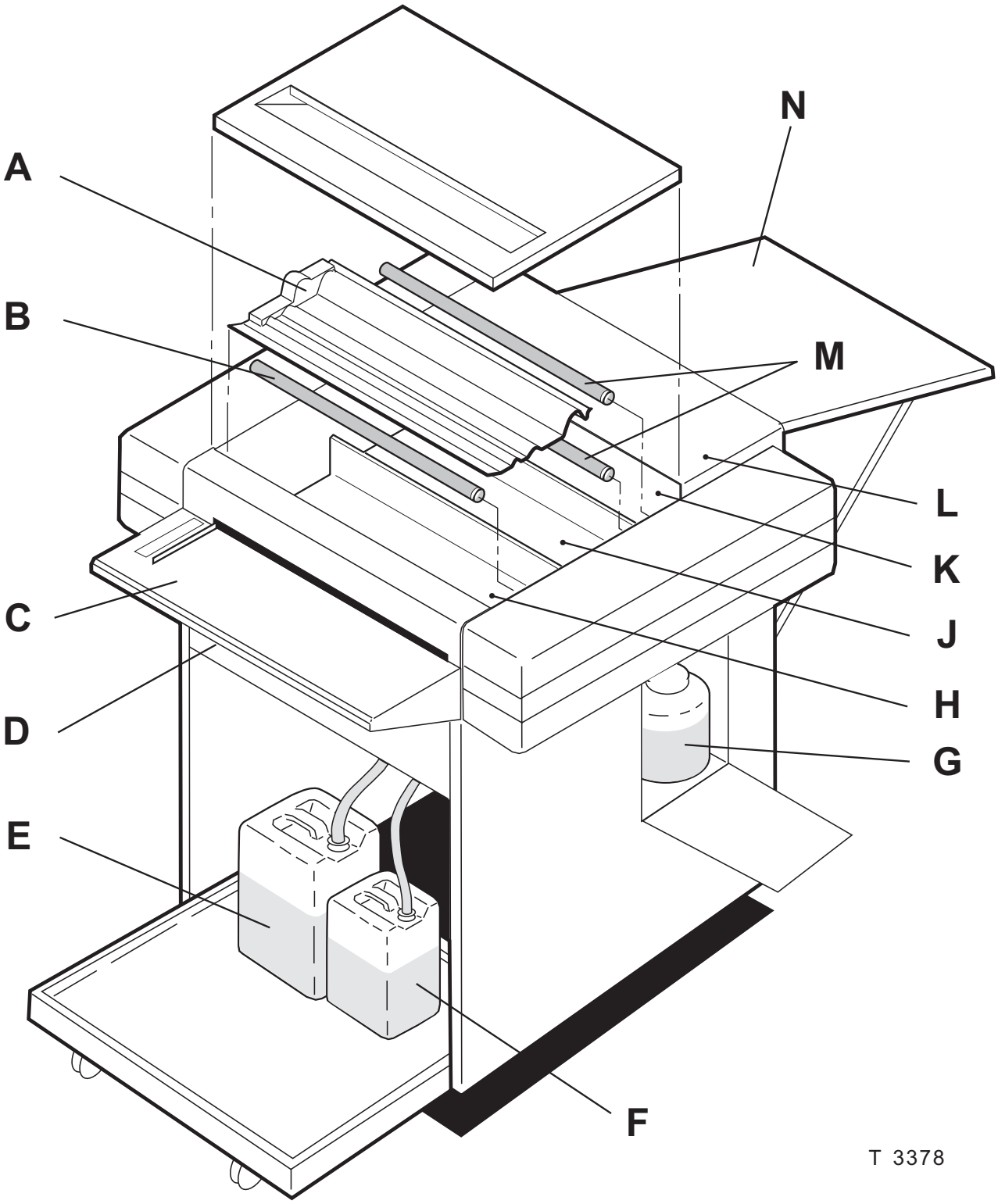
CLEANING OF THE GUM GRATE

The processor is equipped with a special grate in the drain opening of the gum section. The grate is designed to prevent the gum solenoid valve from being blocked if something mistakenly drops into the opening.
The grate should be taken out regularly and cleaned. Remember to reinstall after cleaning.



CLEANING OF DEVELOPER FILTER

Clean the filter regularly as described below:
Close the two valves (A), one on each side of the filter housing (B).
Open the drain valve (C) to empty the filter vessel (D) of chemicals.
Unscrew the filter vessel (D) carefully.
Take the filter element (E) out and clean it or change it whatever is necessary.
Install the filter element again. The O-ring (F) must be properly fitted in the groove in the filter vessel (D).
Remember to open the valves (A) again.
If the filter is fitted with an airbleeding screw (an allen screw in the top of the filter housing (B)), this should be opened momentarily to allow trapped air to escape.


A
B
C
D
E
F
N
M
L
K
J
H
G
T 3378

DAILY CLEANING

(See illustration opposite).
Wipe the feed table (C) and the exit table (N) with a moist cloth.
Do not use abrasive materials on the processor.
Remove and clean the developer oxidation-cover (A).
Check the level in the developer replenishment tank (F) and gum container (G) and refill if needed.
Empty the container for waste chemicals (E).
Run the gum-rinse program at the end of the day.
Start the program by pressing the “GUM-RINSE” button on the Control Panel.

WEEKLY CLEANING

(See illustration opposite).
Remove all rollers and clean them in warm water.
Remove the developer spray tube (B) from the processor and wash it in warm water.
Clean the holes in the spray tube and reinstall.

MONTHLY CLEANING

(See illustration opposite).
Remove all guides and wash them in warm water.
Remove the wash section spray tubes (M). Flush them with warm water. If algae buildup is visible, clean the tubes with a longhandled bottle brush.
Remove all worm gears and bearings and inspect for excessive wear. Replace worn or damaged parts.
Clean the components of any residual chemistry.
Lubricate the bearings.
Clean the developer tank (H), the wash tank (J) and the gum tank (K) thoroughly with warm water and a soft cloth. Do not use ordinary household detergent or abrasive materials to clean the tanks. When needed use a good tank cleaner in the developer section. Be very careful to get all the cleaner out of the developer section after cleaning.
Remove the rollers from the dryer section (L) and rinse them in warm water.
Wipe the teflon coated rollers with a moist cloth.
Reinstall all parts after cleaning.

CHECK OF DEVELOPER REPLENISHMENT

The developer can either be checked with a control strip (ask your local dealer of chemicals), or you can use a well exposed and well processed plate as reference.
If the density of your plate decreases after a week's work, the replenishment is probably too low and a higher setting of the REPLENISHMENT RATE should be selected.
However, if the density is good, the replenishment is sufficient. A lower setting can then be tried, until it is established which setting is enough for satisfactory replenishment.