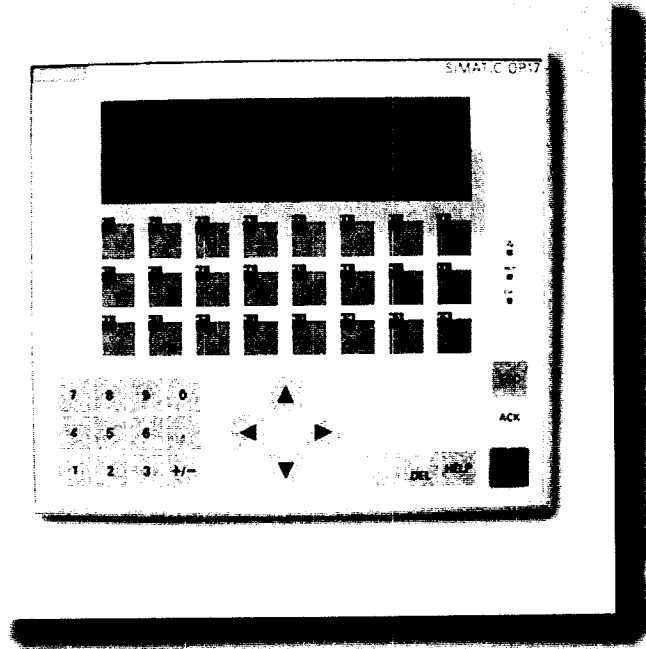


# OPERATION PANEL OP 17

















LABMASTER 130, MB 20G, MB 30G






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# 1. Occupancy of function-keys

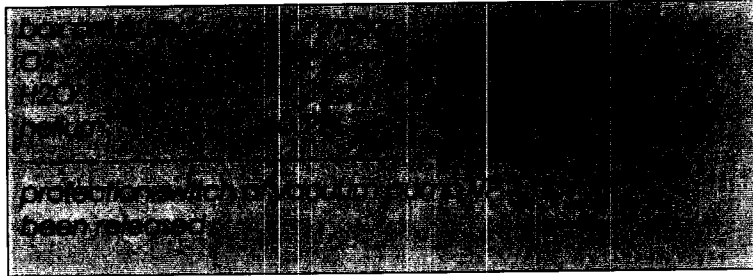
	Circulation with Purifier		
	Regeneration of Purifier		
			
			
	Autom./Evacuate oven		
			
	Analyzer on/off		
	Light on/off		Vacuum pump VPG (purifier) on/off

## The LED of the keys:

-  = off
-  = on
-  = locked

## 2. Operation notices

*Notice level  
of machine*




Always visible.  
Actual parameters of the box  
are indicated.

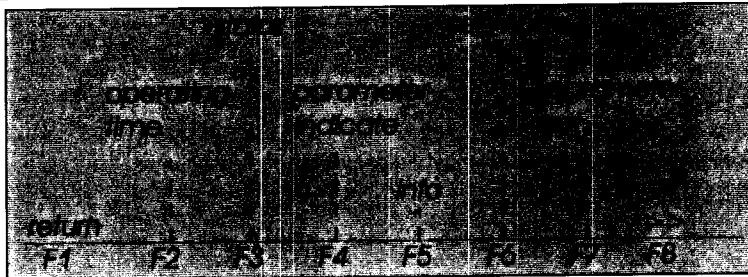
Two notices at the same time  
can be displayed.  
If more than 2 notices are  
activated notices in display  
change every 3 seconds.

### 3. Panel menus

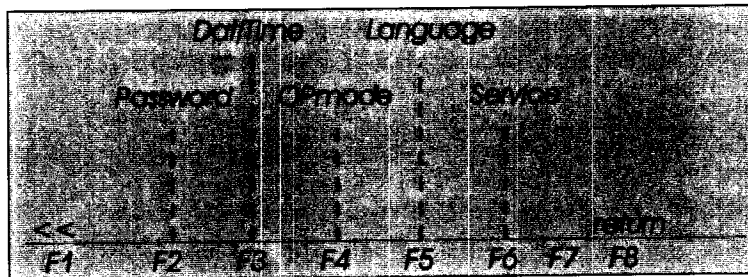
#### 3.1 selection menu





Pushing the  button takes You to the selection menu


Starting mode menu panel



Selection menu II

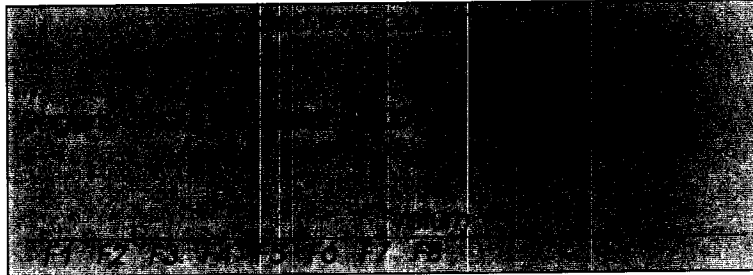


Pushing  -  takes You to the single menus. With  You select the next selection menu and with  the preceding menu.

By pushing  You leave the menu level and the operation notices are displayed.

### 3.2 Operating time of purifier

Mode:  
*operating time*





Regen.: Operating time purifier since last regeneration = 12 h  
total: total purifying time 1 = 300 h operating time

The mode "*operating time*" You reach via the selection menu I and (operating hours)

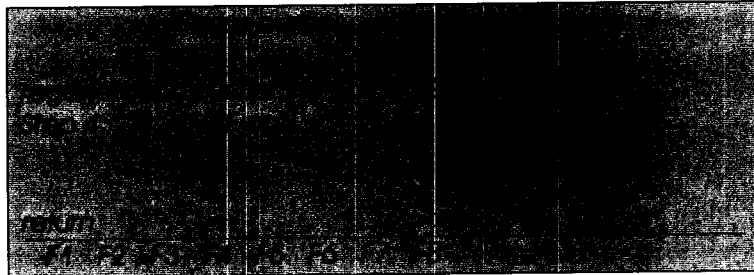
F 2

**Choice:**

- 1. menu 
- 2.  (Operating time)


### 3.3 Status of purifier

Mode: status





regeneration purifier:  
shows the remaining regeneration time.

Step 4: VRE on:  
shows the current step of regeneration the purifier is executing (including the display of the selected valves and heaters).

The mode "Status" You reach via selection menu I and  (status)

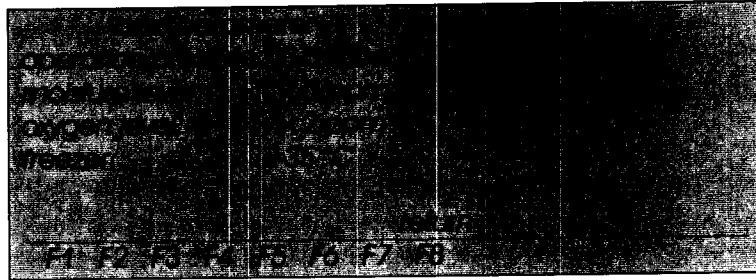
**Choice:**

1. Menue 
2.  (Status)

### 3.4 Parameter indication

The mode "parameter indicate" You reach via selection menue I and  (parameter indicate)

Mode:  
parameter  
indicate



operation pressure\*:  
display of box pressure (actual value) in mbar (kpa)

moisture level\*:  
concentration of H<sub>2</sub>O (actual value) in vpm (a value lower than 1 vpm is displayed as < 1 vpm, a value higher than 350 vpm is displayed as > 350 vpm)

oxygen level\*:  
concentration of oxygen (actual value) in vpm (a value lower than 1 vpm is displayed as < 1 vpm, a value higher than 990 vpm is displayed as > 990 vpm; the oxygen analyzer ist turned on at a concentration of oxygen lower than 300 vpm to protect the oxygen sensor)

freezer\*:  
freezer temperature (actual value) in degrees Centigrade (°C).

\* If the system is equipped with moisture and oxygen senesors the read outs for moisture and oxygen values appear. If not the corresponding functions in the display are deactivated.

## 3.5 Info

The mode "Info" You reach via selecting menu I and



### Choice:

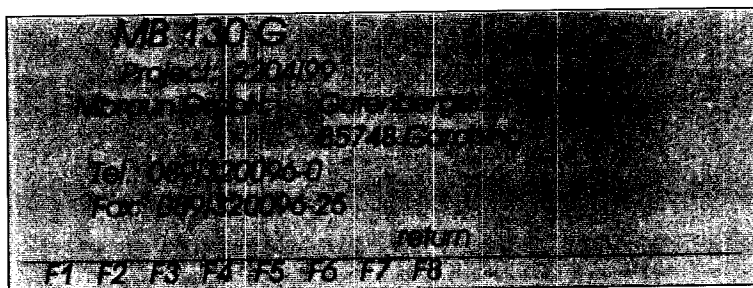
1. Menue



2.



Mode Info



In the "Info" - mode the address and the phone number of M. Braun are memorized.  
If You have any questions about the system please always inform us about the project number and the type of the system.

By pushing

F 8

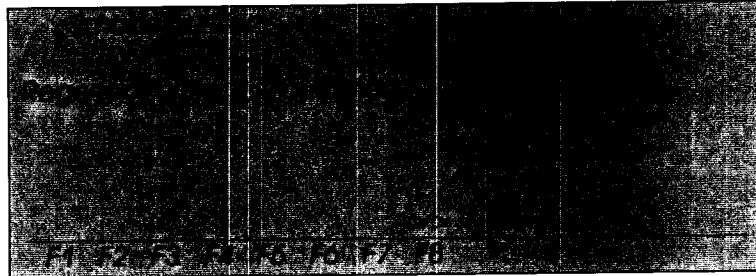
(Return)

## 3.6 Modes of operation

The mode "modes of operation" You reach via selection menue I and (set modes)



Mode:  
modes of  
operation



### Regener. Purifier 1:

You can choose between "automatic" and "manual" operation. By pushing and then ▲ or ▼ You can change the operation mode.



The change of the operation mode is password-protected.

#### "automatic" mode:


The regeneration cycle runs automatically after choosing the *regeneration* function.

#### "Manual" mode:

The regeneration-cycle will be run manually step by step. This method of operation can only be executed by specially trained M. Braun service personnel.

Please note: Do not forget to complete the whole manual regeneration cycle ! Otherwise the system can be damaged.

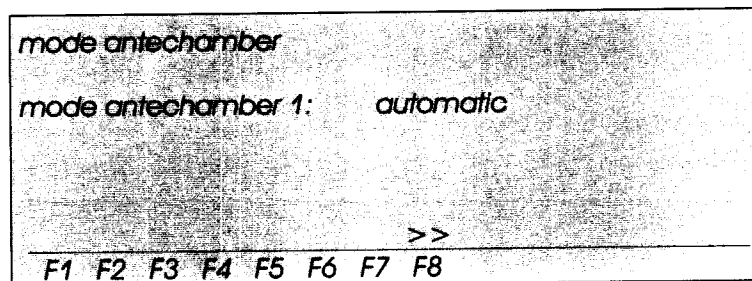
F 8

The mode "operation mode antechamber" You reach by pushing , if Your system is equipped with one or more automatic antechamber controllers.

#### Choice:

1. Menue 
2. 
3.  (Set modes)

Mode:  
modes of  
operation





Operation mode antechamber:

There are three methods of operation, "automatic", "manual" and "evac/refill".

By pushing  and afterwards  or  You can change the operation mode.

"evac/refill" operation:

The mode "evacuate/refill" You can operate the antechamber manually.

By pushing  and  You can evacuate or refill the antechamber manually.

(Evacuate  
antecham.)

(refill  
antecham.)

"automatic" operation:

The antechamber-cycle will be run automatically by pushing




(evacuate  
antecham.)

"manual" operation:

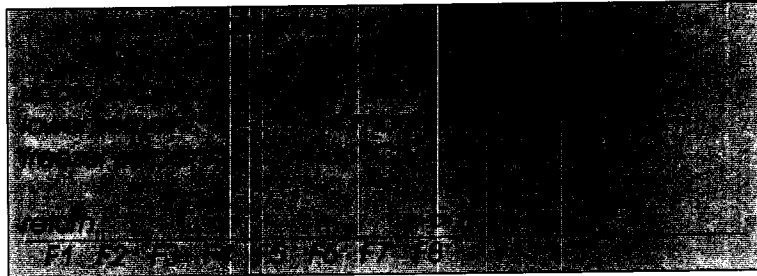
The automatic cycle will be run step by step.

This method of operation can only be executed by specially trained M. Braun service personnel.


### 3.7 Setting of parameters

The mode "parameter set" You reach via selection menu I and  (parameter set)

Mode:  
parameter set




#### Set box pressure:

For the time this display is selected the box pressure controller is switched off. With the pedal (gas/evacuate) You can adjust the pressure to any value. The upper and lower setpoint can be set directly with the keyboard. (Point the cursor to the value to change, put in the desired value and confirm with the  button.



Until the confirmation of the value with the "Enter" - button the cursor cannot leave the input-position).

The upper and lower setpoints must be within the limits of the alarm setpoints. If the upper setpoint is set lower than the lower setpoint, the upper setpoint cannot be confirmed. In this case, the setpoints are set to the maximum value automatically. The minimum difference value between upper and lower setpoint is 1 mbar (kpa).

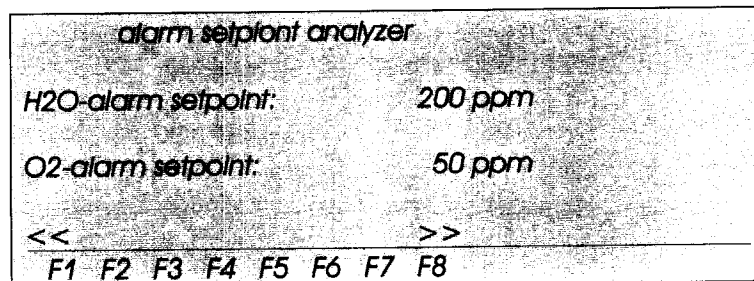
#### set freezer temperature:

The rated temperature can be put in directly with the keyboard (Point the cursor to the value to change, put in the desired value and confirm with the  button.


Until the confirmation of the value with the "Enter" - button the cursor cannot leave the input-position).

By pushing  You get back to the notice level, by pushing  You reach the next parameter.  
(Return)

Mode:  
parameter set





Set H2O and O2 alarm setpoints:

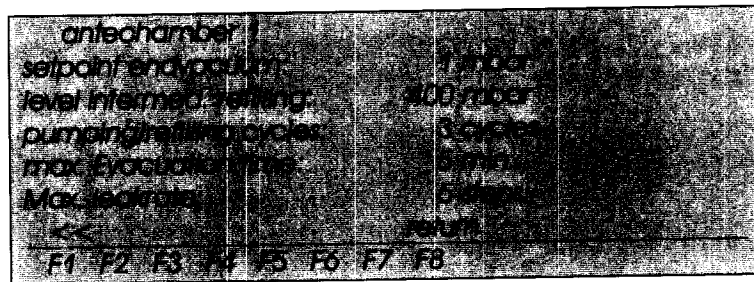
The alarm setpoints can be put in directly with the keyboard. (Point the cursor to the value to change, put in the desired value and confirm with the  button.

Until the confirmation of the value with the "Enter" - button the cursor cannot leave the input-position).


If the box-atmosphere exceeds the alarm setpoints, the announcements "H2O too high" or "O2 too high" will appear on the display.

By pushing  You get back to the notice level, by pushing  You reach the next parameter.


Mode  
parameter set





Set antechamber parameter (for automatic antechamber controller):

The parameter can be put in directly with the keyboard (Point the cursor to the value to change, put in the desired value and confirm with the  button.

Until the confirmation of the value with the "Enter" - button the cursor cannot leave the input-position).

If the values "setpoint endvacuum" und "intermediate refilling" change You cannot put in the desired value with the keyboard. You have to push the  button to change the set values.

Afterwards You can change the values with  and .

The chosen value has to be confirmed by pushing the  button.

intermediate refilling:

until this working pressure is reached the antechamber is refilled.

setpoint endvacuum:

The leaktest is made at this working pressure. After the pump/refill cycles evacuation takes place until this working pressure is reached.

pumping/refilling cycles:



shows how often the antechamber is evacuated and refilled again.  
"0" = no intermediate refilling.

maximum evacuation time:

if the pressure value set in "maximum leakrate" is not reached within the set time the loading procedure is stopped and the message "evacuation time exceeded" is displayed.

maximum leakrate:

shows the maximum value the pressure is allowed to reach during the pressure-difference-measurement. 2 steps=pressure rise of 2 units within the measured decade (e.g. From  $2 \times 10^{-1}$  mbar to  $4 \times 10^{-1}$  mbar).  
if this value is exceeded during the leaktest the loading procedure is stopped and the message "leak in antechamber" is displayed.

By pushing  You get back to the preceding parameter, by pushing  You reach the notice level.

## 3.8 Service

The mode "Service" You reach via selection menu II and



### Choice:

1. Menue



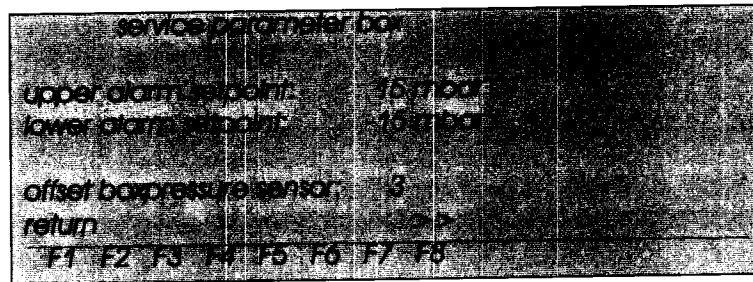
2.



3.




Mode  
service



The upper and lower setpoints are password-protected. Only specially trained M. Braun service personnel is allowed to change them.

### set service parameter:

The parameter can be put in directly with the keyboard. (Point the cursor to the value to change, put in the desired value and confirm with the  button.

Until the confirmation of the value with the "Enter" - button the cursor cannot leave the input-position).

### offset box pressure:

The offset-adjustment of the box pressure sensor can only be made by specially trained M. Braun service personnel.

By pushing

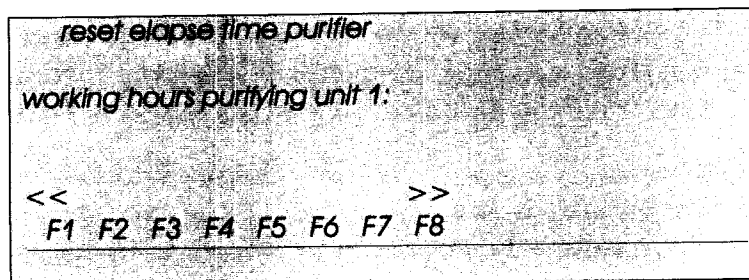
F1

You get back to the notice level, by pushing



F8

You get to the next

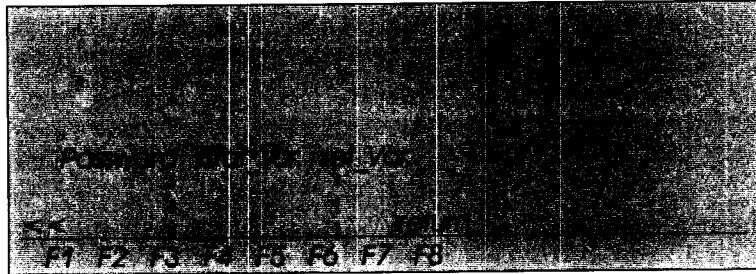
Mode  
service



The function "reset elapse time purifier" is executed after an exchange of the filter loading only by specially trained M. Braun service personnel.  
This function is password-protected.

By pushing  You get back to the notice level, by pushing  You get to the next parameter.

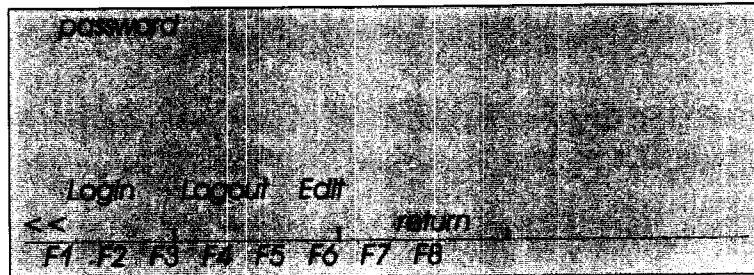
Mode  
service



enter password:

After choosing the function "Password" a password-menus is displayed.

Mode  
Service



Login:

After selecting the function



You can enter a password via the keyboard.

Confirmation with



Logout:


After selecting the function




the user gets logged out of the program of the OP 17.

The password is no longer activated.

Edit:

After selecting the function  the passwords from level 1 - 8 can be put in directly with the keyboard.

(Point the cursor to the value to change, put in the desired value and confirm with the  button.)

You cannot change the "Supervisor"-password in level 9

Password:

Here You can enter a password or create new passwords (only for service-reasons-change of parameter).

SteuVar / StatVar:

In these modes the variables of the SPS-program can be looked at or changed. Only specially trained M. Braun service personnel is allowed to enter these modes.

Contact



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