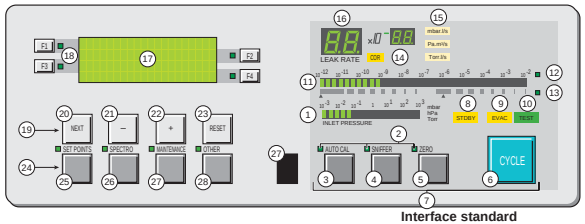
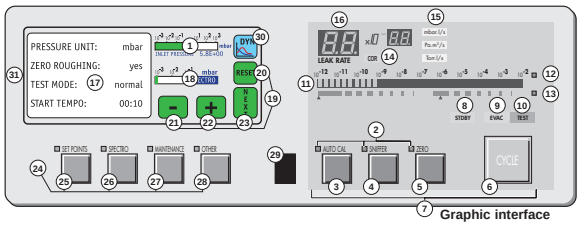
## OPERATOR INTERFACE




Interface standard

| | | |
|---|---|---|
| 1 | | Inlet port pressure analog display |
| 2 | | Control and menu selection indicators (ON when activated) |
| 3 | | Auto-calibration START/ABORT control key |
| 4 | | Sniffing mode ON/OFF control key |
| 5 | | Auto-zero ON/OFF control key |
| 6 | | Cycle START/STOP control key |
| 7 | | Control keys (4 keys) |
| 8 | | Standby ON/OFF indicator |
| 9 | | Evacuation ON/OFF indicator |
| 10 | | Test ON/OFF indicator |
| 11 | | Helium signal analogic display |
| 12 | | Helium signal analogic scale ON/OFF indicator |
| 13 | | Helium signal Zero scale ON/OFF indicator |
| 14 | | Correction factor COR indicator (applied to digital display) |
| 15 | | Units ON/OFF indicator |
| 16 | | Helium signal digital display |
| 17 | | Alphanumeric display (4 lines x 20 characters) |
| 18 | | Parameter function keys (1 key per display line) |
| | 18 | Analyzer cell pressure analogic display |
| 19 | | Modification access keys (4 keys) |
| 20 | 23 | NEXT : next display/parameter circular function |
| 21/22 | | Plus or minus value adjustment, parameter selection, audio volume adjustment keys |
| 23 | 20 | RESET of previously displayed values (cancels temporary inputs) |
| 24 | | Menu selection access keys (4 keys) |
| 25 | | SET POINT menu selection key |
| 26 | | SPECTRO calibration and analyzer cell configuration menu selection key |
| 27 | | MAINTENANCE menu selection key |
| 28 | | OTHER menus selection key (test mode selection, inlet VENT selection, date/time) |
| 29 | | Remote control connection (accessory) |
| | 30 | Graphic interface selection key |
| | 31 | Color touch screen |

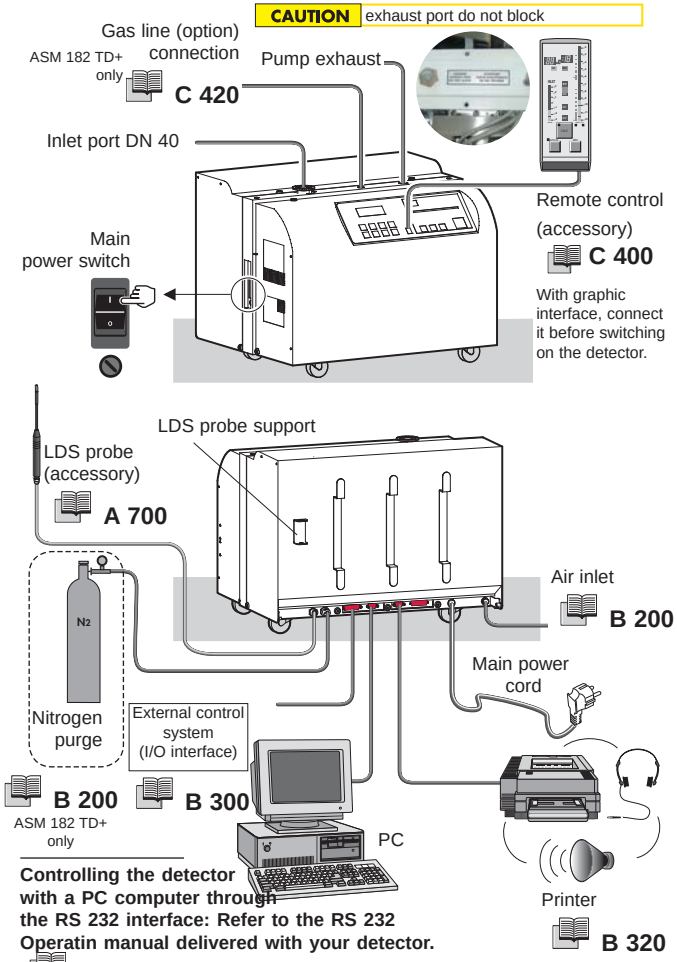



Graphic interface

# CONDENSED MANUAL ASM 182 T ASM 182 TD+

**References refer to a specific chapter of the Operating manual.**
**For further information, please refer to the Operating manual supplied with your unit.**

## DETECTOR CONNECTIONS

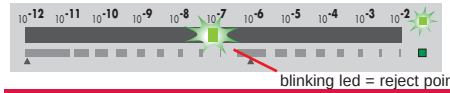



## HELIUM SIGNAL ANALOG DISPLAY

**Leak detector in hard vacuum or sniffing test mode and zero function not activated.**
How to read the He signal analog scale?

- Reject point is visualized by a blinking led.
- If the leak value exceeds the reject point, the leds will turned red (the blinking led will turn orange).
- If the leak value remains under the reject point, the leds will remain geen.

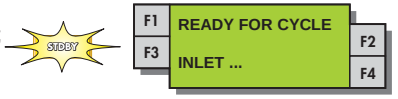
Example: reject point = $1 \cdot 10^{-7}$ mbar.l/s

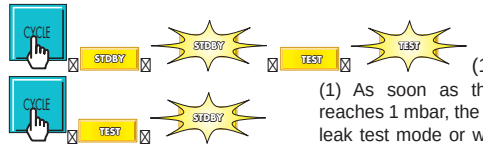



blinking led = reject point

## TEST CYCLES

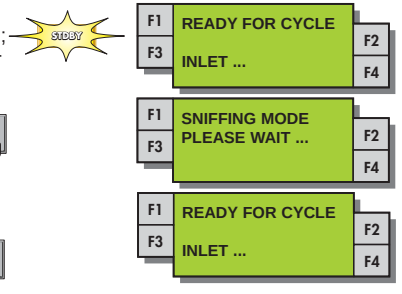
**Hard vacuum test mode**
Leak detector in stand-by mode ; connect the part or assembly to be test to the detector.




(1) As soon as the inlet pressure reaches 1 mbar, the unit goes in gross leak test mode or when the pressure has reached $2.10^{-2}$ mbar, the unit goes in high sensitivity test mode.

**Sniffing test mode**
Leak detector in stand-by mode ; connect the long distance sniffer probe to the quick connector.




***Basic operation of the leak detector*** **C 210**

## ASSISTANCE TO THE TEST

The leak detector offers to the user 5 interesting functions in order to improve test.

**Memo function** ..... Memorization of the latest He signal measured after depressing the CYCLE key at the end of the cycle.

***Memo function*** **C 550**

**Cycle end** ..... Automatic control of the roughing and measure timers.

***Cycle end*** **C 530**

**Bargraph zoom on the reject point** ..... Display a greater resolution of the He signal around the reject point.

***Bargraph zoom on the reject point*** **C 510**

**Helium pollution prevention** ..... Device that prevents the unit from getting polluted with Helium.

***Helium pollution prevention*** **C 560**

**Helium background suppression** ..... Automatic zero function.

***Zero function*** **C 540**

## USER INTERFACE LEVEL

The detector offers **4 user interface levels** for this section to accomodate any application requirements.

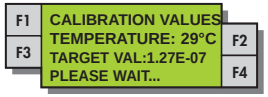
| | Setting and maintenance part | User part |
|---|---|---|
| **Level** ① | This level has very limited information on the alphanumeric display (LCD). This level is generally selected for production types of applications. | No access to control keys (Cycle key included) |
| **Level** ② | This level allows the operator to visualize some parameters without the possibility of making any changes.<br>Same as Level ① this level is usually selected for production types of applications. | Access to all the control keys |
| **Level** ③ | Same as level ② but with possibility to set some parameters. This level is generally selected for maintenance applications. | |
| **Level** ④ | This level allows access to all the parameters and is generally used for settings all the parameters.<br>**Note:** When switching from level ④ to any other level, the switch can be performed without using the password. This level is generally selected for R&D applications. | |

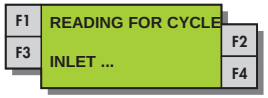
***To know your user interface level and to change it*** **C 120**

## CALIBRATION

**Internal**

The internal calibration is automatically activated during the start-up process. It doesn't require any operator action.
Thanks to the initial auto-calibration, the leak detector can be immediately operationnal.
The result of the auto-calibration process is displayed.




Internal auto-calibration on request: it can be started by the operator whenever needed (the unit has to be off-cycle).


**External**

The external auto-calibration allows direct readout in cases of operation with an auxiliary pumping system.

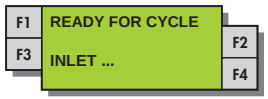
***Calibration of the leak detector*** **C 300**

## AIR INLET

**Purpose**

At the inlet of the detector, 2 functions are proposed to the operator:
- connection to the vent air function,
- connection to the gas line (ASM 182 TD+ only).

The indicator "inlet: vent off" indicates that the venting valve is not activated (= closed) at the end of the cycle.
The setting by default is "vent off" (= valve closed).




**Connection to the gas line option :**

***Air inlet*** **C 500**

Refer to the User's Manual. ***Gas line option*** **C 420**

## ZERO FUNCTION

**Purpose**

The zero function offers the operator the possibility to detect small leaks that are smallers than the helium background.
The zero function could be activated manually by the operator or automatically (He background suppression).

**Manual activation of the zero function**

Connect the part or installation to be tested.


On the digital display, the leak detector He background displays.


The digital display becomes 0.0E-00. On and after this time, it will display only He variation.

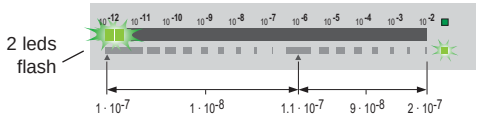
**Manual deactivation of the zero function**


**Automatic activation/deactivation of the Helium background suppression**

Refer to the User's Manual.

**Analog display**

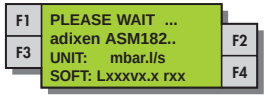
- When the zero function is activated, use the He signal zero scale.
- The He signal zero scale displays 2 leds signal centrered around the zero value.

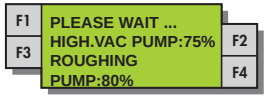



***Zero function*** **C 540**

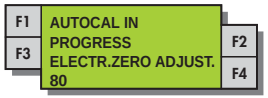
## START-UP

1 - Connect the main cable from the detector to the proper power outlet.
2 - Depress the main switch to position "I". On the control panel, the indicators lights flash.
3 - The following screens are shown on the LCD.

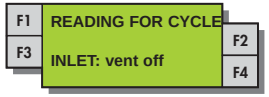



4 - When the TMP pump reaches its nominal speed, the unit auto-calibrates itself.




5 - When calibration is completed, the unit is ready to start a cycle.





***Starting up/Switching off the leak detector*** **C 200**

## AUDIO ALARM

The audio alarm offers 2 modes of operation. They are both linked to the zero function.
**Zero function not activated**
The audio alarm start when the He signal exceeds a fixed set point: this set point is programmable.
**Zero function activated**
The audio alarm is modulated with respect to the position of the helium background.

***Audio alarm*** **C 520**

## INTERVAL MAINTENANCE OPERATIONS

| Frequency* | Operation | See chapter |
|---|---|---|
| **2000 h(1) or 3 years(2)** | Change the RVP 2021 rotary vane pump oil. Replace the cartridge (oil mist eliminator). ☒ | **E 750** |
| **4000 h(1) or 6 months(2)** | Clean the vacuum lines, the valves and the gauges with alcohol - Dust the electronic boards and the fans - Clean filters (inlet filters,air inlet filter) | **E 400** |
| | Partial maintenance of the analyzer cell: Replace analyzer cell filaments and collector. Clean the analyzer cell with alcohol (this cleaning may be necessary in case of general internal contamination creating insulating deposits). | |
| **8000 h(1) or 1 year(2)** | Sniffer probe filter replacement if used. | **G 200** |
| | Pirani gauge adjustment. Replace the seal in the RVP 2021 rotary pump. | **Contact customer service** |
| **12000 h(1)** | Regrease the molecular pump MDP 5011. Regrease the turbomolecular pump TMP 5154. | **E 740** |
| **16000 h(1) or 2 years(3)** | Recalibration/exchange of the internal calibrated leak. | **E 570** |
| | Complete service of the RVP 2021 rotary vane pump.☒ | **Contact customer service** |
| **22000 h(1) or 1 years(3)** | Replace the ball bearings and the seals of the molecular pump and turbomolecular pump. | **E 740** |
| | Complete maintenance Dry pump (ACP 28).☒ | **Contact customer service** |
| **500 000 cycles** | Clean the valves. | **E 530** |

☒ ASM 182 T only. ☒ ASM 182 TD+ only.

*(1) running time*
*(2) running time or storage*
*(3) storage*

**Service intervals: The service intervals given are for applications and work rates which conform to the normal operating conditions. If the machine is operating under more difficult conditions they can be shortened.*

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