
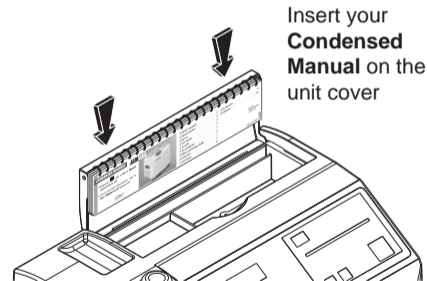




- References  refer to a specific chapter of the **Operating manual**.
- For further information, please refer to **Operating manual** supplied with your unit.

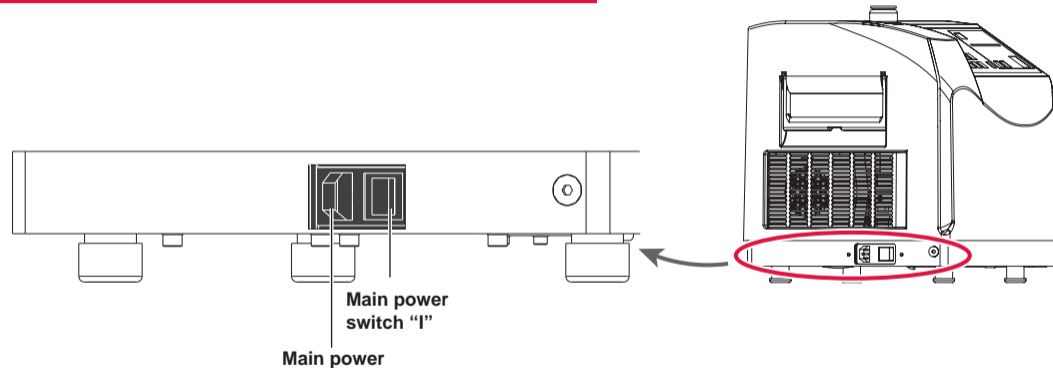


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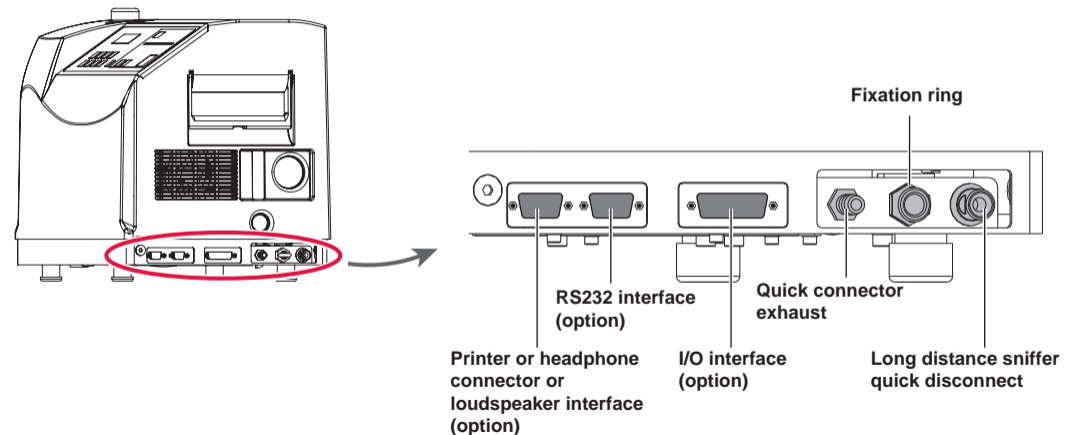


# Detector connections

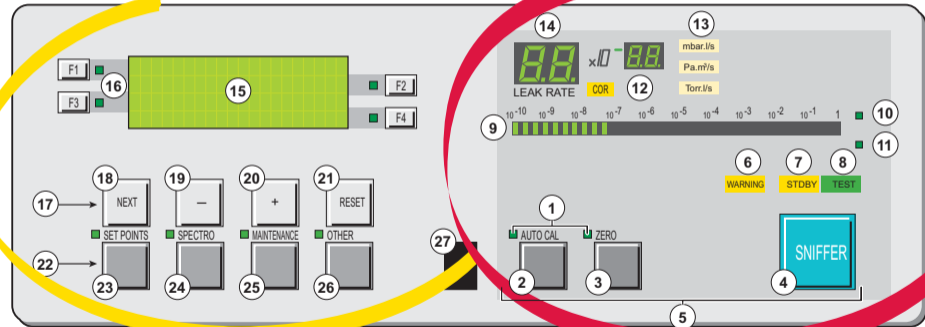
Left side



Right side



# Operator interface ASM 142 S



Setting and maintenance part

Operation part

- 1 Control and menu selection indicators (ON when activated)
- 2 Autocalibration start/stop key
- 3 Zero start/stop key
- 4 Sniffing start/stop key
- 5 Control keyboard (3 keys)
- 6 Fault indicator
- 7 «Sniffing stop» state indicator
- 8 «Sniffing start» state indicator
- 9 Tracer gas analogic display
- 10 decades scale use indicator
- 11 2 decades scale use indicator
- 12 Extra units use indicator
- 13 Basic units use indicator
- 14 Digital display
- 15 Alphanumeric display (4 lines x 20 characters)
- 16 Parameter keyboard (1 key per display line)
- 17 Modification keyboard (4 keys)
- 18 NEXT: next display/parameter circular function
- 19/20 Plus or minus value adjustment, parameter selection, audio volume adjustment keys
- 21 RESET of previously displayed values (cancels temporary inputs)
- 22 Menu selection keyboard (4 keys)
- 23 SET POINT menu selection key
- 24 SPECTRO calibration and analyzer cell configuration menu selection key
- 25 MAINTENANCE menu selection key
- 26 OTHER menus selection key (date, time, language, unit)
- 27 Remote control connection (accessory)

# Start-Up

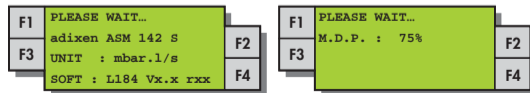
## CAUTION

After unpacking the unit, please fill up the roughing pump with oil, as indicated in the Operating manual

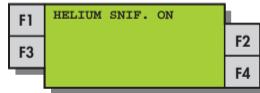
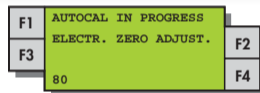


E 750

- 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 indicator lights flash.
- 3 The following screens are shown on the LCD.



- 4 When the detection pump reaches its nominal speed, the unit autocalibrates itself.
- 5 When calibration is completed, the unit is ready to test.



# User interface level

The detector offers 4 user interface levels for this section to accommodate 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. 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. 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

# Sniffing test

## ■ SNIFFING TEST MODE

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

Starting Sniffing test mode



Ending Sniffing test mode



## ■ CORRECTION FACTOR TO USE

You can find here after the correction factor to use following gas and unit used.

These values are given as a rough guide and are only conversions of units. For an equivalence of leak, it is necessary to take into account the nature of the gas, its pressure and the equivalent diameter of the leak.

	PPM		g/year				oz/year											
	He	R12	R404A	R22	R134A	R407C	SF6	Isobutane	R410A	He	R12	R404A	R22	R134A	R407C	SF6	Isobutane	R410A
Mbar l/s	1,00E+06	5,63E+03	1,37E+05	1,22E+05	1,44E+05	1,21E+05	2,06E+05	8,17E+04	1,02E+05	1,98E+02	6,00E+03	4,84E+03	4,29E+03	5,06E+03	4,28E+03	7,25E+03	2,88E+03	3,60E+03
Torr l/s	1,33E+06	7,49E+03	1,83E+05	1,62E+05	1,91E+05	1,61E+05	2,73E+05	1,09E+04	1,36E+05	2,64E+02	7,98E+03	6,44E+03	5,71E+03	6,73E+03	5,69E+03	9,64E+03	3,83E+03	4,79E+03
Pa m³/s	1,00E+07	5,63E+04	1,37E+06	1,22E+06	1,44E+06	1,21E+06	2,06E+06	8,17E+05	1,02E+06	1,98E+03	6,00E+04	4,84E+04	4,29E+04	5,06E+04	4,28E+04	7,25E+04	2,88E+04	3,60E+04

Example for R134A gas: **Flow (g/year) = 1.44E+05 x Flow (mbar l/s)**

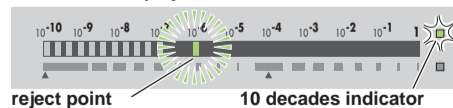
## He signal analog scale display

- Helium signal reading on the analogic 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 green.

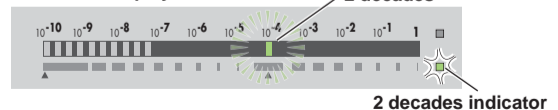
Zero function  
not activated

Example: Reject point =  $1 \cdot 10^{-6}$  mbar l/s

10 decades display



2 decades display



## 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 starts 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

To active/deactive audio alarm  C 520

# Zero function

- **Purpose:** the zero function offers the operator the possibility to detect small leaks that are smaller than the helium background.

- **Activation of zero function:**




→ on the digital display, the ASM142 S He background displays.

ZERO



→ the digital display becomes 0.0E-00. On and after this time, it will display only Helium variation.

Operator could find an example in the Operating manual  **C 540**

- **Deactivation of zero function:**

ZERO

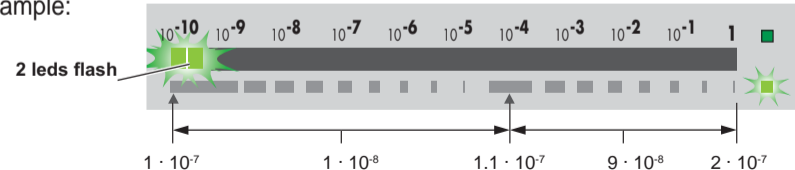


→ The digital display shows the standard He signal.  
Use the 2 decades He signal scales.

- **Analog display:**

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



Example:




# Calibration

At any time, the operator can launch a calibration (detector in stand-by). According to the selected source for the calibration, the calibration procedure is different.


## ■ Calibration with an internal calibrated leak:

- Place the sniffer probe in the calibration orifice +  .
- Consult all the procedures according to the selected source  **C 301.**


Calibration of the leak detector  **C 300**

# Assistance to the test

## ■ 10 DECADES/2 DECADES DISPLAY

- Display a best resolution of the He signal around the reject point.
- Allows to customize its display according to its needs  **C 212.**

## ■ MASSIVE FUNCTION

- This function requires the remote control use.
- Refine the measure in raising the set reject point to 130 % of its value  **C 590.**