

## 2.1 GENERAL SPECIFICATION

Alcatel ASM 110 TCL is a complete portable leak station. It includes a gas analyser and a roughing system.

It comes in two separated units (figure 2) :

	GAS ANALYSER	ELECTRONIC CABINET
WIDTH	380 mm	230 mm (1/2 rack)
LENGTH	530 mm	250 mm (3 U)
HEIGHT	470 mm	150 mm
WEIGHT	53 kg	5 kg

### POWER SUPPLY



220 V. - 50 Hz.	single phase	
115 V. - 60 Hz.	single phase (Option)	800 VA
100 V. - 60 Hz.	single phase (Option)	
240 V. - 50 Hz.	single phase (Option)	

### OIL CAPACITY FOREPUMP






500 cc

## 2.2 SYMBOLS

### 2.21 GAS ANALYSER (figure 2)

LOCATION	SYMBOLS	SIGNIFICATION
Throttle valve	 	Opened Closed
Selector valve	Position 0 Position 1 Position 2 Position 4	Mechanical pump blanked-off Inlet port roughing Closed Loop circuit Direct reading detection
TMP information	Yellow light Green light Red light	$< 27000$ tr/mn $= 27000$ tr/mn Default

### 2.22 ELECTRONIC CABINET (standard, figure 5a)

LOCATION	SYMBOLS	SIGNIFICATION
Green light	$< 10^{-2}$	Analysis cell pressure is $10^{-2}$ mbar
Green light		Filament on
Green light		Throttle valve is opened
		Sensibility adjust- ment
		Audio signal volume control
		Audio signal thresh- hold
	"0"	Zero adjustment knob
		Recording output 50 mV
	He	Helium signal adjustment

### 2.3 OPERATION SPECIFICATION OF THE ASM 110 TCL LEAK DETECTOR

- Maximum operating pressure of the analysis cell	10 <sup>-4</sup> mbar
- Pumping speed for He :	
- in front of the analysis cell	30 l/s
- at the inlet valve	8 l/s
- Intrinsic sensitivity of the analysis cell	3,5.10 <sup>-4</sup> A/mbar
- Variation of sensitivity as a function of pressure between 10 <sup>-6</sup> and 10 <sup>-4</sup> mbar	+40 % maximum
- Smallest detectable signal	2.10 <sup>-11</sup> atm.cm <sup>3</sup> /s He
- Leak Rate Detection Range :	
- direct	2.10 <sup>-11</sup> to 1.10 <sup>-5</sup> atm.cm <sup>3</sup> /s He
- closed loop circuit	1.10 <sup>-5</sup> to 3.10 <sup>-1</sup> atm.cm <sup>3</sup> /s He
- Pirani gauge detection	1 to 100 atm.cm <sup>3</sup> /s He
- Response time :	
- scale 10.10 <sup>-10</sup>	1,5 s
- scale 3.10 <sup>-9</sup>	1 s
- scale 10.10 <sup>-9</sup> - 10.10 <sup>-6</sup>	0,5 s
- Filament protection (triode)	off at 2.10 <sup>-4</sup> mbar
- Turbomolecular pump protection (Pirani gauge)	Closing of the safety inlet valve at 5.10 <sup>-2</sup> mbar
- Audio signal	Adjustable on the whole range
- Air roughing pumping speed at the inlet port	1 l/s