



USER MANUAL

VISIOTAMBOUR
MANOMETER RECORDERS

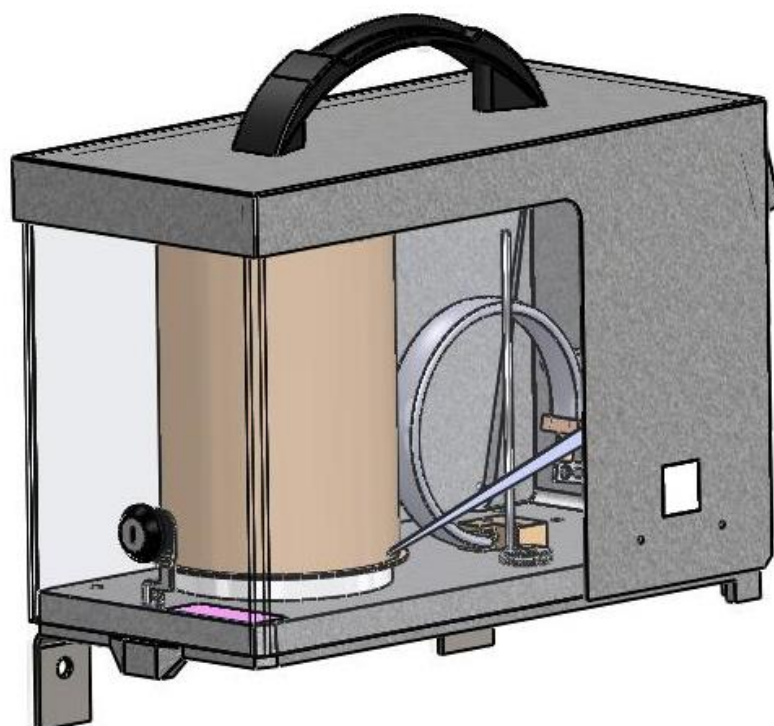
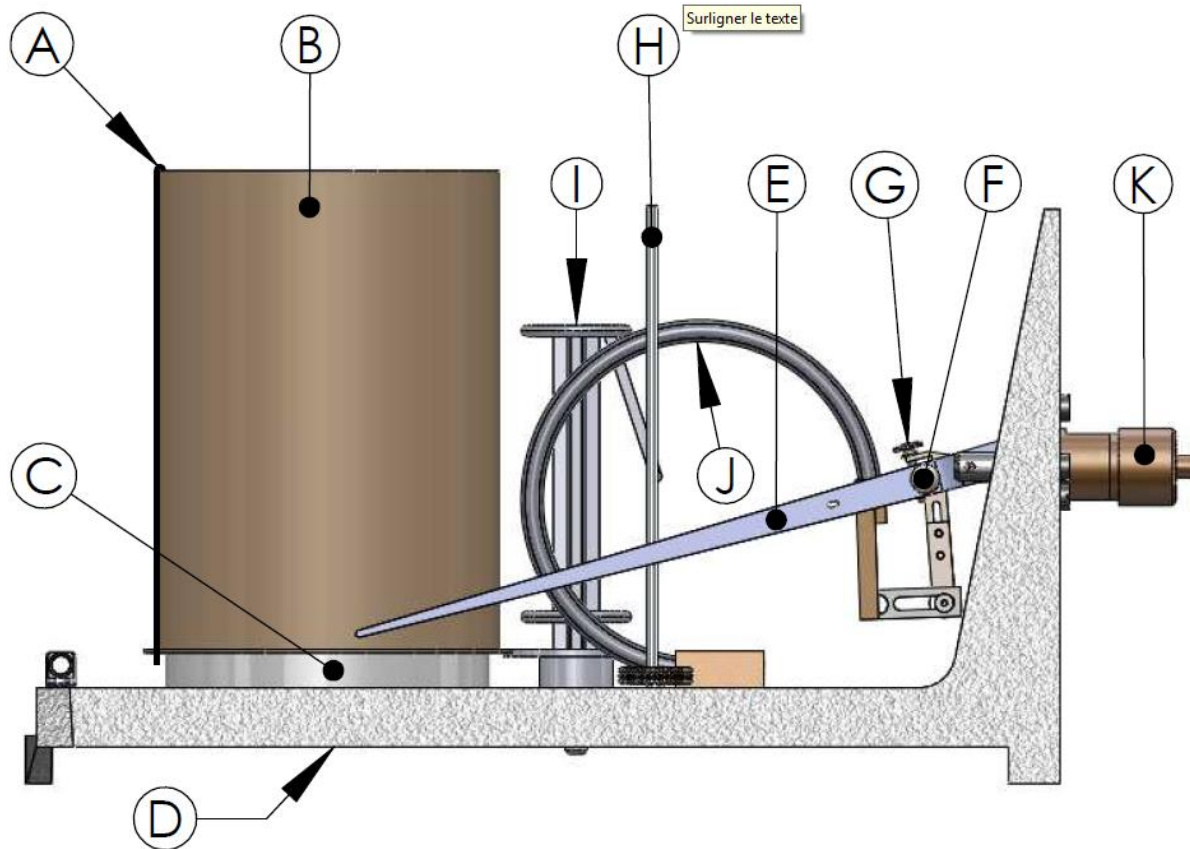


TABLE OF CONTENTS

I. DESCRIPTION	9
II. PRESENTATION.....	10
III. PUTTING INTO SERVICE	10
1. Opening the instrument	10
2. Starting a quartz crystal movement	10
- Installing a new battery	10
- Changing rotation speed	10
- Starting a mechanical movement.....	11
- Fitting a chart paper	11
3. Attaching the fibre-tip pen	11
4. Time and date setting	11
5. Pen pressure adjustment	11
IV. INSTALLATION	12
V. TECHNICAL FEATURES.....	12
VI. DIMENSIONS	13
VII. GUARANTEE	13

I. DESCRIPTION



A	CHART PAPER FASTENER
B	DRUM (HEIGHT: 130MM)
C	MOVEMENT (QUARTZ/MECANICAL)
D	FIXING OF THE MOVEMENT (MECHANICAL)
E	PEN SLIDE HOLDER
F	RECORDING PRESSURE ADJUSTMENT SCREWS
G	ADJUSTMENT SCREW
H	PEN LEVER SYSTEM
I	ROLL SUPPORT
J	SENSOR: MEMBRANE (0-400mB) « BOURDON » TUBE (600mB-40B) AUGER-GIMLET (50-1000B)
K	COUPLING (1/2G-1/2NPT-3/8G)

II. PRESENTATION

The VisioTambour manometer recorders are direct action instruments (the sensing element operates directly) intended to record pressure on chart paper using a fibre-tip pen.

The chart paper is wound round a cylinder, which is rotated by a fully independent clockwork mechanism:

- Electric with crystal oscillator and battery backup or
- Mechanical spring type.

Several recording periods are proposed as a standard feature: 4/6/24 hours – 7 days – 4x7 days.

The recorders are protected by a rugged grey metal casing and come with a transport handle. The crystal plastic panoramic cover makes it possible to inspect the chart over the complete circumference of the drum, without having to remove the cover.

Each instrument is delivered in an anti-shock packaging and comes with:

- 1 fibre-tip pen in a sealed envelope
- 100 charts according to speed
- 2 keys
- 1 user manual
- Models equipped with a quartz crystal movement are supplied with a 1.5V LR6 battery.

III. PUTTING INTO SERVICE

1. Opening the instrument

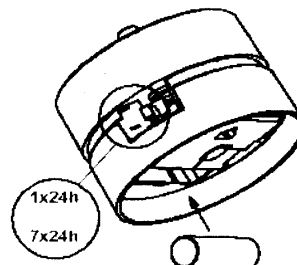
- Unlock the cover with the key.
- Remove the cover by making it swivel.

2. Starting a quartz crystal movement

To start a quartz crystal movement you need to install the battery:

➤ Installing a new battery

- Move the pen (E) away from the drum by moving the pen lever (H) located on the recorder base.
- Immobilize the instrument and remove the movement and the drum from the base by pulling and oscillating them simultaneously.
- The access to the battery is located under the mechanism. Respect the polarity marks on the mechanism.



Note: the standard CDEI R6 or LR6 battery lasts for more than a year at 23°C. Use a waterproof alkaline type battery.

- Changing rotation speed
 - Multi-speed versions: Once the drum and the movement have been removed from the base, separate them by holding the movement steady and pull the drum off in order to get access to the . To shift gear push the lever up (1x24H) or down (7x24H).
 - To put into service again, reverse the above procedure. Once the drum and the movement have been put back into place press with your flat hand on top of the drum to make sure that it fits properly.
- Starting a mechanical movement
 - Wind up the spring by turning the key counter-clockwise. Do not force; when resistance is encountered this indicates maximum wind up. The characteristic operating noise of the clockwork movement should be audible.
- Fitting a chart paper
 - Move the pen \textcircled{E} away from the drum by moving the pen slide holder lever \textcircled{H} on the recorder base.
 - Remove the chart paper fastener \textcircled{A} , holding the chart against the drum, by pulling its top part backwards (beige drum models with quartz movement) or pulling it up (grey drum models with mechanical movement).
 - **“4/6/24 hours and 7 days” models:** Place the chart paper on the drum and make sure to stretch it and that it rests on the base flange and that both ends overlap where the chart pen fastener is positioned. Replace the fastener to keep the chart paper in place.
 - **4x7 days models:** Place the chart paper roll on the support \textcircled{I} and fasten the end of the chart paper to the drum with the chart paper fastener \textcircled{A} .

3. Attaching the fibre-tip pen

Slide the tip of the pen slide holder into the pen slides, until the width of the pen slider holder acts as a stop.

Remove the point protector by pulling and turning it simultaneously. The pen is now ready to record. Do not touch the tip with your fingers. The average service life of the pen is 4 to 6 months (tracing of approximately 90m).



4. Time and date setting

Rotate the drum manually so as to set the pen point on the abscissa at the beginning of the chart paper, taking care to reduce pinion backlash, by rotating the cylinder backwards without forcing. To clearly indicate the start of the recording, make a “time mark” by lowering the pen slightly.

5. Pen pressure adjustment

To obtain regular recordings the pen must rub lightly against the paper. Set the pen pressure on the drum using the small knurled knob \textcircled{F} at the head of the stylus. The

pressure must be light and just sufficient to obtain adequate inscription over the complete height of the drum.

The pressure can be checked by tilting the recorder by approximately 45° towards yourself. The pen should then lift gently off the paper (the vertical rod of the pen lever system should be behind the pen without touching it).

Once these operations have been carried out, close and lock the cover.

IV. INSTALLATION

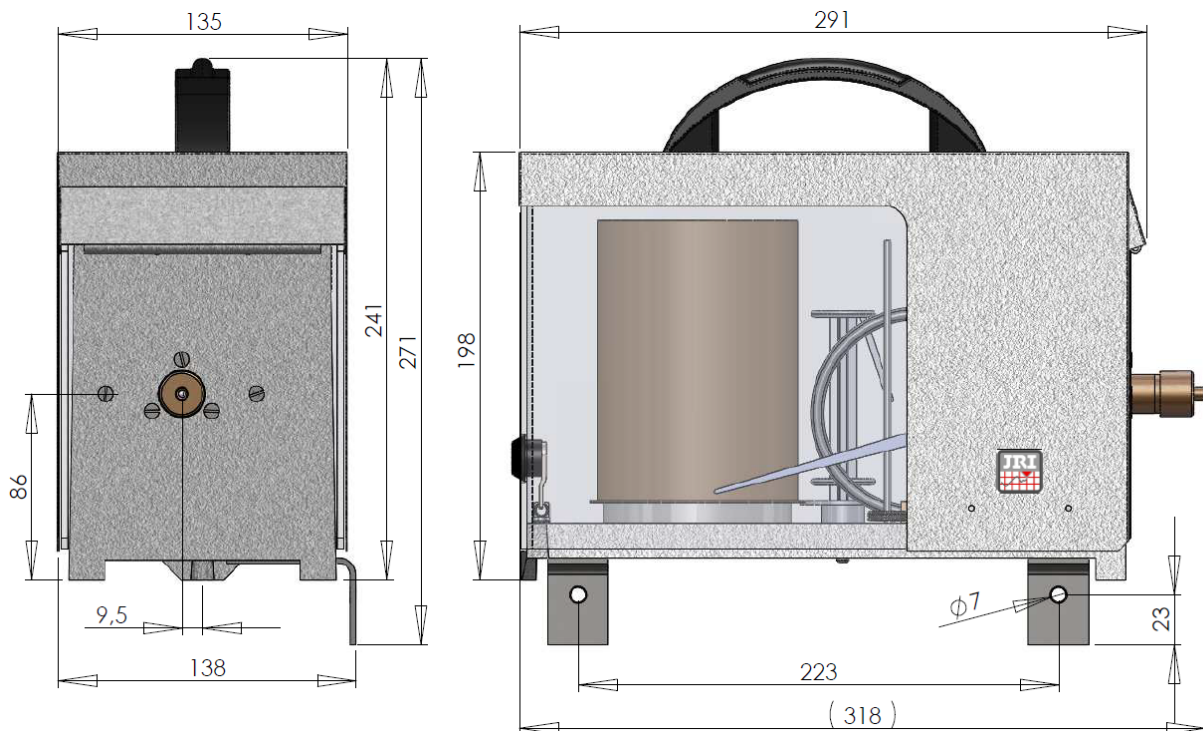
The recorders are suitable both for inside and outside installation. But make sure that the base is kept in a horizontal position.

If installed outside, they must be placed in a well-ventilated shelter, protected from bad weather. In general instruments must not be exposed to heat radiation (sunlight, lamps, radiators etc.) and must not be placed close to cold or wet walls.

V. TECHNICAL FEATURES

Sensors	Drum dimensions (mm)	Effective chart height (mm)	Accuracy	Standard measurement ranges (MR)
Membrane	∅ 93 x 130	100	± 1.5 % (MR)	30mB to 400mB
« Bourdon » tube	∅ 93 x 130	100	± 1.5 % (MR)	-1BAR and from 600mB to 40BAR
Auger-gimlet	∅ 93 x 130	100	± 1,5 % (MR)	50BAR to 1000BAR
Acceptable over-pressure : 120% of the MR				
Storage conditions			- 35°C +65°C	
Operating conditions			- 30°C and + 65°C	
With quartz movement With mechanical movement				
Weight				
Quartz model with battery Mechanical model			2.9 kg 3.1 kg	

VI. DIMENSIONS



Dimensions (mm)

VII. GUARANTEE

Our products carry a one year guarantee against defects in components or workmanship, working defects or abnormal wear. This guarantee is limited to the replacement of the defective pieces and the repair of the involved instruments, returned carriage paid to our factory, and excludes any damages or ancillary costs.

The guarantee starts from the date of the invoicing of the concerned product. For any guarantee application request, the purchase invoice should be produced. The under guarantee repairs or intervention do not extend the guarantee limit granted at the sale of the product. The guarantee does not cover damage caused by incorrect use or abnormal storage conditions.