

Pressure Generator portable with AIR



Model : CAA-20B

Concerns the models :

✓ model : CAA-20B



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Your Model :

Serial number :

Made the :

to contact Sales Manager : d.regal@aremeca.fr

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Read the instructions before handling and retain this information for future use

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The pressure generators models CAA describes in this manual are designed and manufactured by AREMECA (France).

Our products follow manufacturing procedures and controls in line with our Quality System ISO9001 version 2008 and in accordance with the standards in force.

This manual commissioning informs the user about the functioning of the instrument and the safety limits for work peacefully.

This manual is an integral part of the device. It must be kept close to the workstation and accessible at any time by the user.

AREMECA reserves the right to alter the content or form of this manual at any time and without notice. And to make technical amendments to change the product.

Responsibility AREMECA is not liable for any damage caused by :

- not in accordance with intended usage,
- non compliance with instructions for use,
- use of the instrument by unqualified untrained operator ,
- a transformation / modification of the device carried by the user.

The operator must have read and understand prior to operating mode and use the device to start handling.

For more information



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a) Device

Device Identification



indicates the model of comparator
ex : CAA-20B

indicates the serial number of comparator

indicates the date of commissioning of the unit

Intended use of the device

Before switching on the device, ensure that the technical characteristics (measuring range, precision, fluid etc...) correspond to your needs



> For example : the maximum pressure defined for this compressor must not be exceeded

The pressure comparator is designed and manufactured for use as described in this document

In this case of misuse or mishandling, outside the technical specifications contained in this manual. The instrument must be immediately isolated, identified as inoperative and must be checked by our service department.

Precautions storage and transport

It's necessary to take care of the unit during storage or transportation. It must be protected from moisture, shock, extreme temperatures and shouldn't be removed or changed.

If the comparator is moved to a new environment (warmer, colder, etc..). Observe the phase of "quarantine" and wait until the device temperature stabilizes at room temperature before handling.

b) L'opérateur

User qualifications



> Improper use of the device can cause significant bodily injury and properly

Qualified operator, due to : it's product training, knowledge in the field of metrology and experiences in field of pressure and knowledge on standards and guidelines, is able to perform the operations describes in this manual. He will be able to detect potential dangers.

AREMECA offers on demand, an installations / commissioning of the instrument performance.

Personal protective equipment (PPE)

The personal protective equipment must be defined in the security register of the user company and made available to the operator. These devices are used to protect the operator from potential risks that impede their safety and health at work.

- Protecting fluid



> Wear eye protection : protects the eyes against splashes and projections of the fluid.



> wear gloves : protect the skin against irritation, allergies.

AREMECA provides for oil dead weight, a bottle of colorless mineral oil. Safety data sheet of used oils are available on request.

a) Unpacking the unit

Upon receipt of the equipment, check the status and content of your package. All of the following elements must be present in the package :

- 1 generator
- 1 capstan consists of 4 delivered arms removed
- 2 connectors G1/2 (supplied as standard unless otherwise specified)
- 1 manual

Check that there isn't damage or breakages during transport. If there are missing items, please immediately notify AREMECA or your local distributor for what is missing.

b) Installation

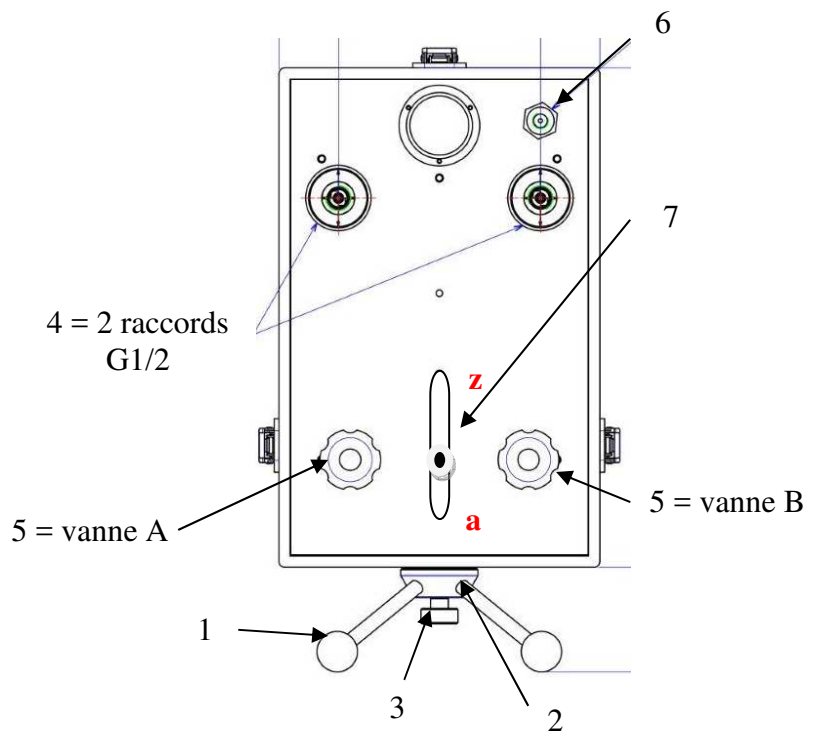
Preferably, install your unit in a stable and controlled environment



You will get better performance if :
> the temperature and humidity of the room are stable,
> the workstation is clean and dry, protected from drafts, noise, vibration, and without passing

Component Identification

- 1 : capstan
- 2 : axis of rotation
- 3 : clamping knob
- 4 : connector
- 5 : valves
- 6 : source pressure connection
- 7 : Cursor position



Installation / Assembly

- Install the pressure generator on a stable place
- Insert the capstan **1** on the axis of rotation **2**, screw the clamping knob **3** to the axis of rotation.
- Remove the yellow caps protections pressure connections.
- Make sure the O-rings are positioned in their throats.
- Place the two connectors rotating G1/2 **4**.
- Make sure that o-ring are well positioned.
- Close the valve **A**

- if necessary, connect the pressure source **6** on the output ¼ cylindrical gas located at the rear of the generator 20 bar maxi

Note : Use a clean gas, dry, no aggressive and no toxic as nitrogen U. Provide a single regulator at the output of the pressure source.



*> Dirty or polluted gauges must be cleaned before mounting the pressure generator to prevent contamination on the hydraulic circuit. Don't clean the tank with alcohol
Option : cleaning bench (Ref.OP0062)*

Be careful with the valves

- Maximum torque applicable abutment valve open = 0,3 Nm
- Maximum torque applicable abutment valve closed = 4 Nm.

When the abutment valve open is reached, turn the wheel valve 1/4 turn clockwise.

c) Put into service



> the generators are equipped with precision valves instrumentation, it is imperative to observe the following guidelines to keep your machine in good working condition.

1. Install on the left connector G1/2 your reference instrument
2. Install on the right connector G1/2 your instrument to be tested
3. Make sure the the valves **A** and **B** are closed
4. Check the capstan **1** is in the stop end position. Turn it in the opposite direction of clockwise.
5. Supply the generator with air and check that the value reading on the manometer is located in a range of the pressure desired for calibration.
6. Open the valve **A**, the generator load pressure gas
7. Close the valve **A**

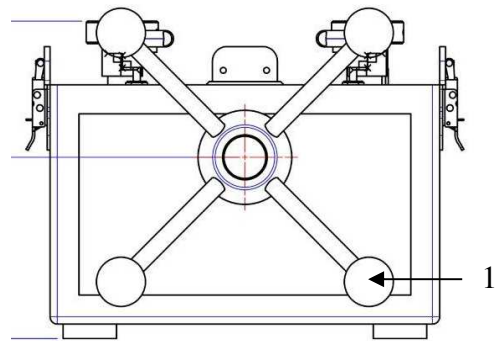
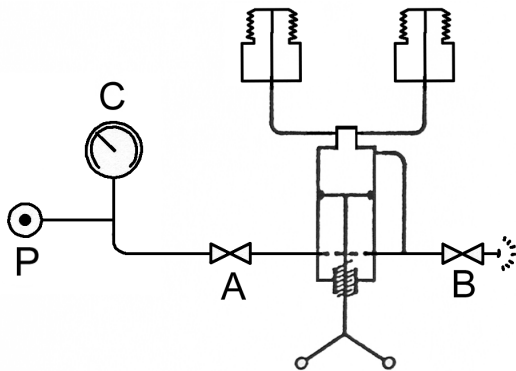
The generator is ready to use

d) Test run after installing

1. Perform a calibration test instrument with a "test" known correct (see chapter procedure) to verify and validate the operational statuses of the pressure generator

2. The device is now ready to use.

> Pneumatic diagram



> Pressure mounted



> *Observe the maximum operating pressures of the pressure generator*

Maximum operating pressure : CAA-20B → 20 bar

- a) Install the reference instrument and the instrument to be tested on the connectors.
- b) Make sure that the valve **A** is closed, and open the valve **B**.
- c) Turn the capstan **1** in the opposite direction of clockwise until the stop end "**a**".
- d) Close the valve **B**.
- e) **The device is now ready for use.**

You can now generate the pressure to the desired value.

- f) using the capstan and turn in the direction of clockwise, the cursor moves to the point "**z**". **Maximum working pressure is 20 bar.** If the generator is connected to a pressure source, you can also use the valve **A**.

> Reduce pressure

Turn the capstan in the opposite direction of clockwise and replace the cursor in position "**a**" and open the valve **B**

Note : Before removing the calibrated device, set the generator at atmospheric pressure by opening the valve **B** to purge the system. "

Work up to -900 mbar vacuum

- a) Install the reference instrument and the instrument to be tested on the connectors.
- b) Open the valves **A** and **B**.

- c) Turn the capstan **1** in the direction of clockwise and place the cursor in position "**z**"
- d) Close the valves **A** and **B**.
- e) **The device is now ready for use.**

You can adjust depression

- g) Use the capstan, turning in the opposite direction of clockwise. the cursor go in position "**a**" **The maximum depression is -900 mbar.**

Note : Before removing the calibrated device, set the generator at atmospheric pressure by opening the valve **B** to purge the system. and replace the cursor in position "**a**"

a) Cleaning

The generator cleaning and checking fluid levels are the only periodic maintenance required. No additional maintenance should be necessary if all instructions are followed.

We recommend a complete overhaul of the unite every 2 years. This operation can only be performed by the manufacturer. If necessary, send us your device for maintenance. A complete assessment of your device will be made and an estimate of rehabilitation will be sent.

Instructions reminders :

- Use only a clean and dry air like nitrogen. This unit is not compatible with oxygen
- Don't remove the device.

b) Maintenance

> Piezometric set

It's designed for extremely narrow limits of accuracy. It's forbidden to disassemble it.

> Valves

Generator and dead weight are equipped with instrumentation valves, it's imperative to observe the following guidelines :

- Maximum torque applicable abutment valve open = 0,3 Nm
- Maximum torque applicable abutment valve closed = 4 Nm.

When the abutment valve open is reached, turn the wheel valve 1/4 turn clockwise.

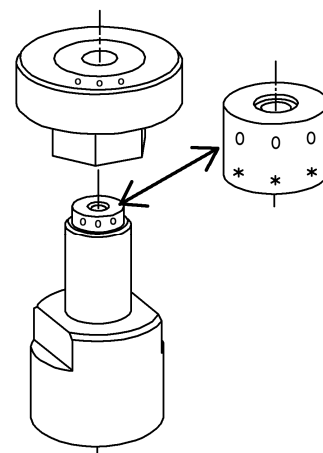
c) Inspection

It's recommend to a service of your device every 2 years. The average response time is 2 weeks. Cleaning generator, replacement o-rings, testing pressure rise and stability are made.

d) Connection

The device is equipped with a specific connector for less than 1250 bar pressure. It is necessary to orient the ring according to the type of connector correctly.

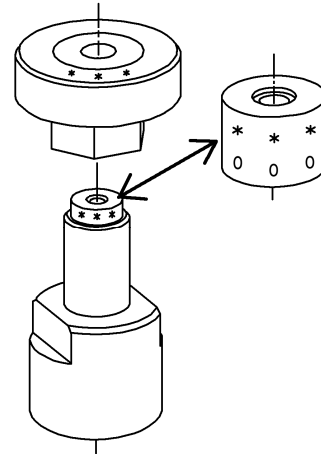
Thread M10x100, G1/8, 1/8 BSP-TR, 1/8 NPT



For these connectors guide ring, mark : **000** visible.
The connector must be tightened by hand.

**Thread M12x150, M16x150, M18x150, M20x150, G1/4,
G3/8, G1/2, 1/4 BSP-TR, 3/8 BSP-TR, 1/2 BSP-TR, 1/4
NPT, 3/8 NPT, 1/2 NPT**

For these connectors guide ring, mark : ******* visible.
The connector must be tightened by hand.



> Available as an option :

Suitcase with 4 connectors type G (Ref.OP0171)

Suitcase with 4 connectors type NPT (Ref.OP0172)

Suitcase with 4 connectors type BSPTR (Ref.OP0173)

Suitcase with 5 connectors type M (Ref.OP0174)

Suitcase with 17 connectors (Ref.OP0037)

standard o-ring (Ref.OP0038CEO)



Connectors

OP0174 : Suitcase with 5 connectors metrics - M10x100 ; M12x150 ; M16x150 ; M18x150 ; M20x150

OP0171 : Suitcase with 4 connectors gas cylindrical - G1/8 ; G1/4 ; G3/8 ; G1/2

OP0172 : Suitcase with 4 connectors NPT - 1/8NPT ; 1/4NPT ; 3/8NPT ; 1/2NPT

OP0173 : Suitcase with 4 connectors BSPTR - 1/8BSPTR ; 1/4BSPTR ; 3/8BSPTR ; 1/2BSPTR

OP0037 : Suitcase with 17 connectors - all connectors

OP0186 : accessories for generator with gauge, connectors, o-rings etc..

Kit cleaning

OP0062 : Cleaning bench for manometers

