

You have receive an Acim Jouanin product.
We thank you for your trust and are proud to welcome you among our customers.

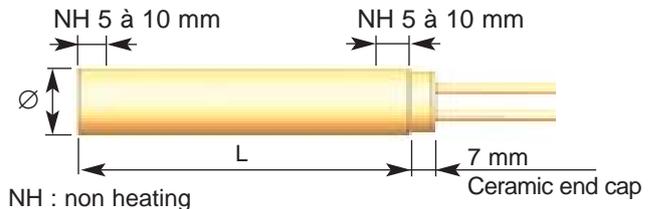
Check the state of the appliance when you unpack it and if necessary, refer to the self adhesive label on the parcel. Please read closely this document befor mounting the cartridge.

CHARACTERISTICS

- Stainless steel sheath.
- Standard connexion : felxible wires, nickel core, fiberglass insulated.
- Voltage : 230 V single phase or according your request.

Manufactured in accordance with EN 60335-1 standards
Tolerance on the wattage : +5% -10%
Leakage current < 0.5 mA/kW

DIMENSIONS OF A STANDARD CARTRIDGE HEATER



SECURITY INSTRUCTIONS

Application conditions-

- This products are sold for industrial using.
- Acim Jouanin could not be responsible neither for material or physical damages nor for loses or costs caused by an inappropriate using of the product or by the non-respect of these instructions.

Normative precautions

- Cartridges are components that you will integrate into your device. Standard cartridges are not equipped with a ground wire. You have to make your installation in accordance with standards and regulations in force and provide the connection to earth via the environment.

Electric precautions

- Installation, configuration, starting up and maintenance of the appliance must be made by a qualified person able to work in the low voltage eletric environment in the industrial sector.
- Cut off the electrical feeding of the appliance and disconnect the cartridge before any intervention.
- Do not place the connection cable close to the sides of the cartridge or close to the block to heat during its fonctionning.
- Do not touch the cartridge with moist hands. Don not use next watering places.

Security precautions

- This appliance must not be used if you find out that one of the component is damaged.
- Protect the cartridge (head and body) from infiltration, water ejection, matter ejection, clogging up, drump... : the cartridge can be destroyed.
- Disconnect the cartridge before any cleaning

Mechanical precautions

- Cartridges are not designed to resist to mechanical shocks.

MANUFACTURING TOLERANCES :

- Tolerance on diameter :

Diameter (mm)	Tolerance (mm)	Diameter (mm)	Tolerance (mm)
6.35 - (1/4")	-0.03 / -0.05	12.7 - (1/2")	-0.05 / -0.08
6.5	-0.03 / -0.05	15.87 - (5/8")	-0.05 / -0.08
8	-0.04 / -0.06	16	-0.05 / -0.08
9.52 - (3/8")	-0.04 / -0.07	19.05 - (3/4")	-0.06 / -0.1
10	-0.04 / -0.07	20	-0.06 / -0.1
12.5	-0.05 / -0.08		

- Tolerance on length :**
- L < 100 mm : ± 2 mm
 - L > 100 mm : ± 2 %

SECURITY INSTRUCTIONS (next)

Precautions for explosive or inflammable areas

- Do not mount the cartridge next a combustibile material, in an explosive area, in an area with inflammable vapor or inflammable material, vapour, humidity...if they are not specifically made for these atmospheres.

Frequent cases of cartridges destruction :

- Check that the network voltage is in conformity with the characteristics of the cartridge. As the wattage is proportional to the voltage squared, any overloading, even brief, can damage the heating elements.
- Check regularly that the cartridge functions within the limits of its parameters.
- Check that there is not any thermic grease in contact with cables or with the ceramic end cap.
- Check that the loose between the cartridge and its housing is the smallest as possible. Recommended bore: H7
- Do not hold or extract the cartridge from its housing by the connection leads: risk of connection destruction

Complaint

- For any claim, please send the cartridge back for assessment and send a letter to the quality department and indicate the problems you have faced.

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CARTRIDGE ASSEMBLY

Assembly and wiring :

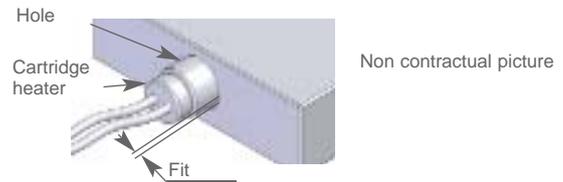
- Before any intervention, cut off the electric connection.
- Check that the network voltage is compatible with the cartridge characteristics.
- The bore receiving the cartridge must be perfectly cylindrical, clean and of perfect finish.
- Check that the fit between the cartridge and its housing is the smallest as possible. Recommended bore: H7. In reference to " § Fit of cartridge".
- See "§ Instructions for use", to optimize the thermal transfer and the regulation
- Insert the cartridge in its housing.
Caution ! Connection leads and cartridge's head must be outside the housing. However, the cartridge must not emerge from more than 5 mm under the head: risk of heating area destruction.
- Check that the connection is not exposed to more than these maximum temperatures :
 - 180°C for a silicone sealing,
 - 250°C if the cartridge has a non heating area and a silicone sealing
 - 350°C for a standard cartridge.
- Check that connection leads :
 - are not in contact with a warm surface,
 - function within the maximum temperatures :
 - fiberglass insulated: 350°C
 - silicone cable and/or sheath: 180°C
- After any electric intervention replace all safety devices position.

Instruction for use :

- We recommend to use thermal transfer grease like GRIPACIM, in order to improve heat transfer. This grease (available on stock) avoids the boring oxidation and the increase of the fit when replacing the cartridge.
Take all the necessary precautions when applying the grease : it must not be in contact with the connection cables or with the ceramic end cap because of penetration risk which could destroy the cartridge.
- It is necessary to mount a temperature controller as close as possible from the cartridge.
It is most necessary for high temperature or when the thermal flux is important.
- Temperature regulation is an important factor:
 - Regulation " all or nothing " is often used for rare regulation cycles
 - Regulation with PID and static relay allows a fine regulation optimizing cartridge's life time.

FIT OF STANDARD CARTRIDGE HEATERS

The fit between the housing and the cartridge must be the smallest as possible to optimize heat transfer.



- H7 is often recommended, but for high loading application it will be sometimes necessary to reduce the fit again (between K7 and P7).
- Check and fit it before assembly or replacement of a cartridge. The life time depends on it.

Diamètre nominal du perçage (mm)	Alésage H7	
	Mini (mm)	Maxi (mm)
6.35 (1/4") - 6.5 - 8 - 9.52 (3/8") - 10	- 0	+0.015
12.5 - 12.7 (1/2") - 15.87 (5/8") - 16	- 0	+0.018
19.05 (3/4") - 20	- 0	+0.021

You have to take cartridge's tolerances and boring into account, by taking the most unfavorable case : Ø mini of the cartridge and Ø maxi de bore.

Example :



- Bore which receiving the cartridge must be perfectly cylindrical, clean and of perfect finish.

Maintenance

- Check that the clamping of connections is always optimal.
- Check that there are no clogging or sediment on the cartridge or on its protective well sheath. If it's needed, clean it after cooling.

Additional precautions

- Cartridges must never be used into the open air, except low density cartridges. Consult our technical department.
- Connections must be protected from excessive flexions, moisture, potential penetration of matter (especially grease), high temperatures...
- If possible, use high temperature leads.

Non using :

After a non-using period of several months or in case of humidity atmosphere : Replace the cartridge in function, proceeding by successive short time heating periods to extract the humidity.

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