



**INSTRUCTIONS 1010-E00 e**

|           |                |
|-----------|----------------|
| Section   | 1010           |
| Effective | September 2011 |
| Replaces  | April 2011     |

Original instructions

# **CC8-40P - CC8-50P - CC8-65P** *pumps*

**INSTALLATION**

**OPERATION**

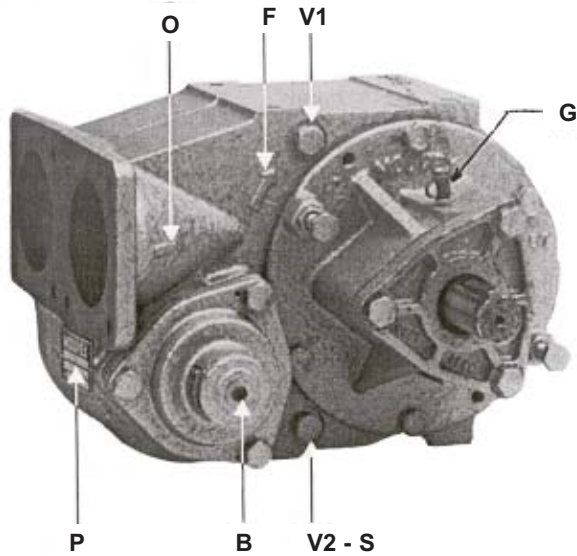
**MAINTENANCE**



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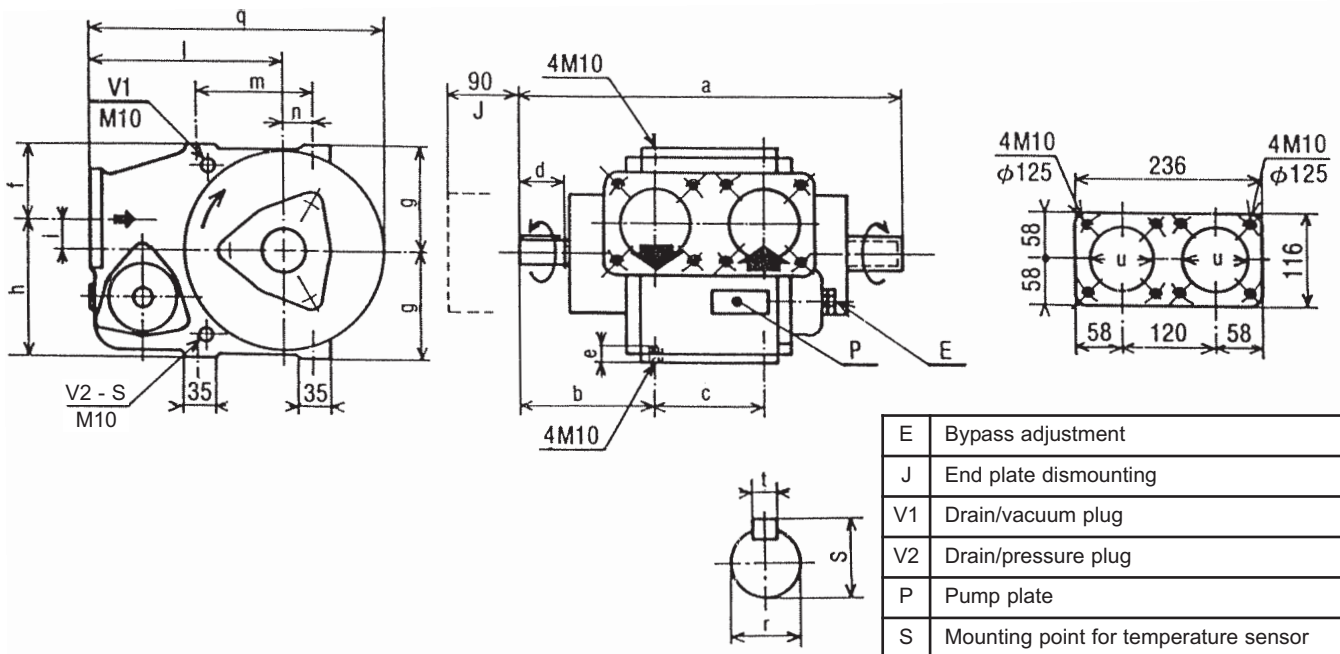
Your distributor :

# 1. PRESENTATION



- B Bypass
- P Pump plate
- V1 Drain plug-vacuum M10
- V2 Drain plug-pressure M10
  
- F Arrow rotation
- O Arrow suction
- S - Mounting point for temperature sensor

# 2. OVERALL DIMENSIONS - mm



| Pump          | a   | b   | c   | d  | e  | f  | g   | h   | i  | l   | m   | n  | q   | r    | s  | t   | u  | Kg |
|---------------|-----|-----|-----|----|----|----|-----|-----|----|-----|-----|----|-----|------|----|-----|----|----|
| CC8-40 CC8-50 | 443 | 158 | 110 | 50 | 17 | 79 | 112 | 145 | 33 | 216 | 120 | 30 | 318 | 30g6 | 33 | 8h9 | 80 | 48 |
| CC8-65        | 475 | 170 | 120 | 52 | 18 | 85 | 118 | 151 | 33 | 222 | 130 | 30 | 338 | 30j6 | 33 | 8h9 | 80 | 57 |

The pump rotates in one direction only. This is indicated by an arrow on the pump housing. However, the pump has both of shaft-ends led out and must be driven through one the other depending on the direction of rotation of the power take-off.

Because the pump rotates in one direction only, the positions of the suction and discharge ports are not be reversed (see arrows on housing). The safety bypass has not to be reversed.

# 3. USE

The operator should remain nearby the equipment throughout the use to ensure the proper functioning of the system.

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## 4. DISMANTLING - REASSEMBLY

Before any disassembly, make sure that the pump has been drained and must not start up, even accidentally.

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## 5. NECESSARY TOOLS

- Flat wrenches 13, 17, 22
- Tube wrench 17
- Circlip opening pliers
- Screwdriver
- Mallet
- Torque wrench

Makeup torques :

- M10 . . . . .3347 da N.mm
- M 8 . . . . .1684 da N.mm
- M 6 . . . . .687 da N.mm

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## 6. DISMANTLING PUMP ON SIDE OPPOSITE TO DRIVE SYSTEM

Unscrew the screws **723**, and remove the cover **712** and the seal **714**.

Remove circlip **537**.

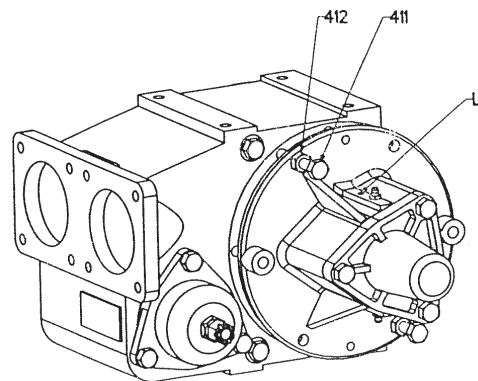
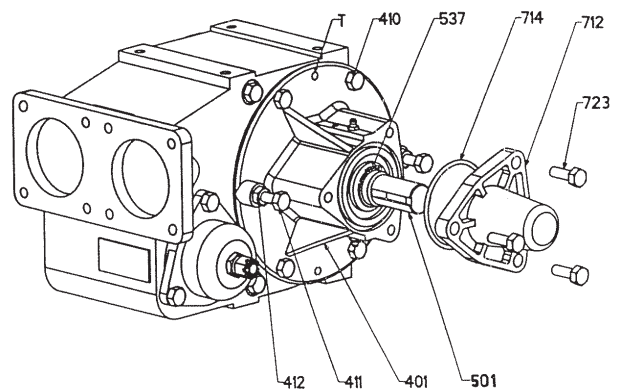
Carefully clean the shaft end (remove any trace of paint, oxidation, burrs...).

Unscrew the 4 screws **410**.

Unscrew the 4 screws **411** fitted with their nut **412** and place them in the 2 tapped holes T.

Screw up the 2 screws at the same time so that the end-plate is gradually released along the centre line.

When the end-plate is free on the shaft, hold it by hand supporting it.



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## 7. DISMANTLING PUMP ON DRIVE SIDE

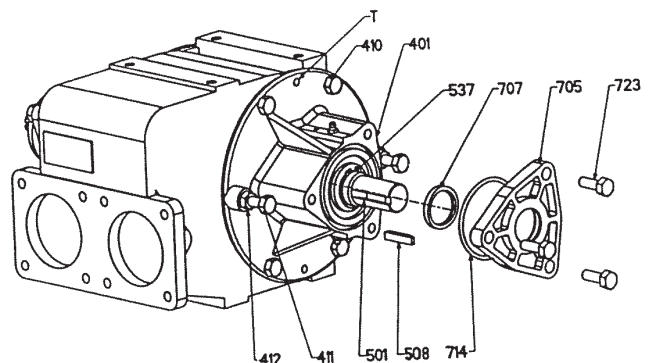
Uncouple the pump by removing the coupling.

Remove the key **508** and carefully clean the shaft end to remove any trace of paint, oxidation, burrs...

Unscrew the screws **723**, remove the cover **705** with its seal **714** taking care not damaging seal **707**.

Remove the circlip **537**.

Operate then in a identical way in § DISMANTLING PUMP ON SIDE OPPOSITE TO DRIVE SYSTEM.



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## 8. REASSEMBLY OF THE PUMP

When putting the end-plate back into place, take care to have the shaft seal drive lugs facing the notches on rotor.

Replace the cover **712** or **705** on the end plate **401** with screws **723**.

Lubricate the shaft **501** slightly.

Make sure that the end-plate seal **403** is correctly positioned, check it and change it if necessary.

Position the end plate **401** on the shaft and approach it as far as possible by hand (make sure to position one of the drainage port L pointing down).

Finish fitting the end-plate, screwing the 2 nuts **412** gradually on to the 2 screws **411**.

Make sure that end-plate is centred while screwing.

When the end-plate is in place, remove the screws **411** and their nuts **412** and screw them up in the 2 bosses taking care to position one of the drainage port L pointing down.

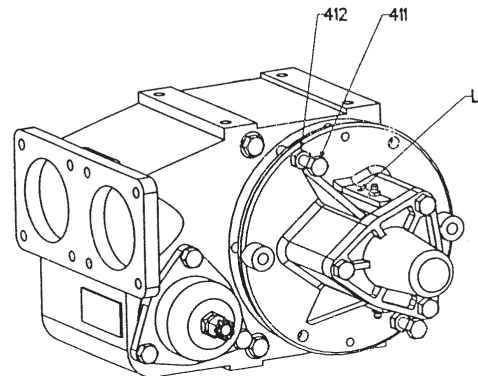
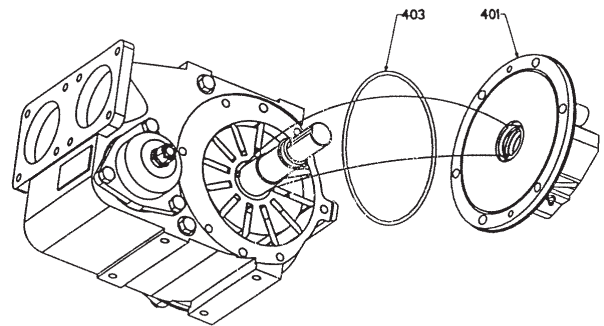
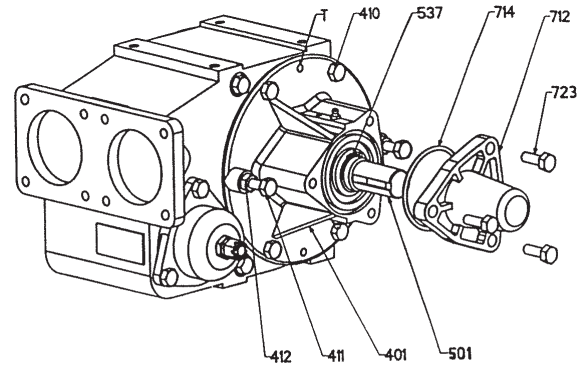
Replace the screws **410**.

Remove the cover **712** or **705**.

Replace the circlip **537**.

Replace the cover **705** with its seal **707** after check condition of seal.

Free the shaft line by a light blow of mallet on its extremity and make sure that the pump rotates freely when turned by hand.



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## 9. CHANGING THE VANES

Open the pump on one side or the other.

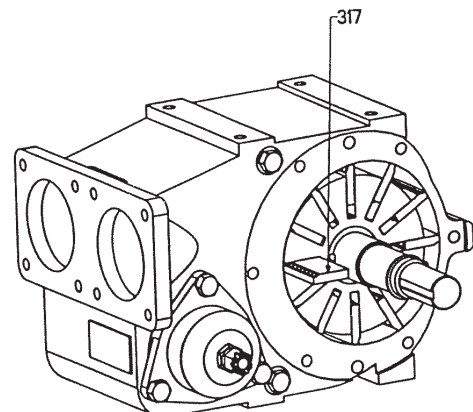
Remove the vanes **317**.

Check for wear (see § MAINTENANCE).

If vane wear is abnormal, check surface condition of body and of end-plate faces.

Refit the vanes (new if necessary) respecting the direction of assembly.

Reassemble the pump and check that it rotates freely when turned by hand.



## 10. INSPECTION OF THE PUSHRODS

Uncouple the pump by removing the coupling.

Dismantle the cover at the non-drive side (see § DISMANTLING PUMP ON SIDE OPPOSITE TO DRIVE SYSTEM).

Unscrew the 4 screws **410** and the 2 screws **411** with their nut **412**.

Pull on the end plate **401** in such a way as to release the rotor **301** from a little more than half of the pump body **101**.

Hold the vanes **317** in place by means of suitable straps (elastic, bracelets...).

Completely remove the shaft **501** with the rotor **301**, the vanes **317** and the complete bearing of the pump body **101**.

Do not dismantle this assembly.

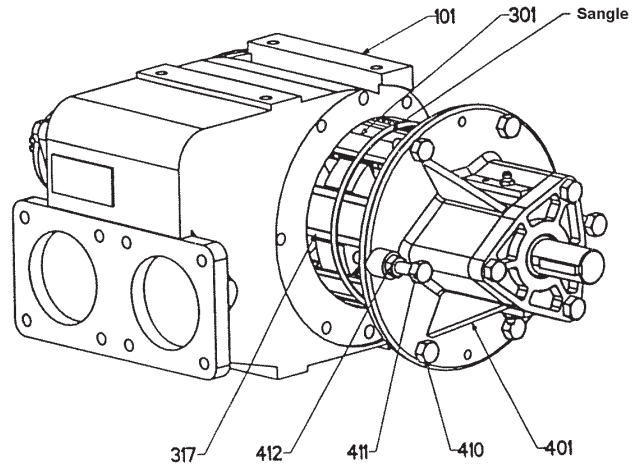
Remove the straps and the vanes **317**.

Remove the pushrods **318** by pushing them, if necessary, with a screwdriver.

Remove the rotor **301**.

Check the pushrods **318** for wear (see § MAINTENANCE) and change them as necessary.

Check the wear of the keyways and of the 2 keys **536**.



## 11. REASSEMBLY OF THE VANES AND THE PUSHRODS

Position the shaft **501** vertically with the end plate facing down.

Position the seal **403**, fixing it if necessary with a suitable lubricant.

Fit the keys **536**.

Insert the rotor **301** on to the shaft **501**.

Check that the holes of the plunger of the rotor **301** coincide with those of the shaft **501**. If they do not, re-insert the rotor **301** in the other direction.

See to it that the shaft seal carrier engages in the notches provided for this effect.

Insert the pushrods using orthogonal matings (see figure opposite).

Insert the pushrods making sure they are fitted in the right direction (see detail A) and check that they slide freely.

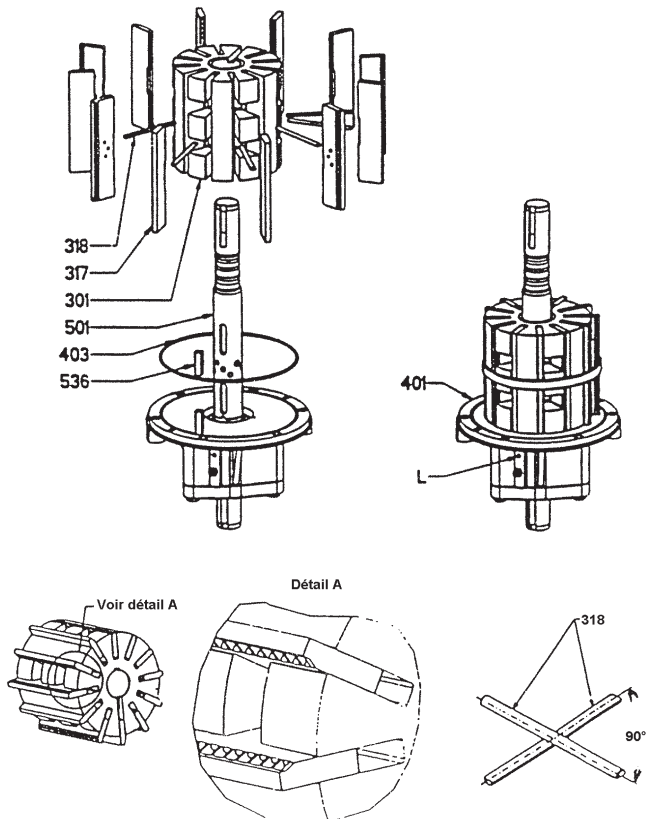
Hold them in place using suitable straps (elastic, bracelets...).

Insert this assembly in the body **101** joining the straps at an opportune moment.

Orientate the end plate **401** with a drainage port L pointing down and fixing it to the pump body **101**.

Re-fit the end plate on the non-drive side (see § REASSEMBLY OF THE PUMP).

Check that the pump rotates freely when turned by hand.



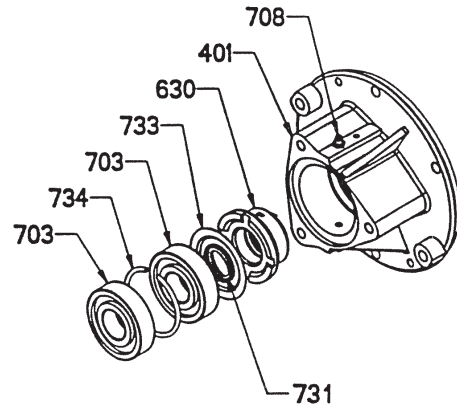
## 12. CHANGING MONOBLOC SHAFT SEAL

### 12.1 Disassembly

Open the pump and remove the end-plate on its machined side taking care not to damage the shaft seal drive lugs.

Remove parts.

Remove shaft seal by inserting fingers in shaft seal center hole.



### 12.2 Reassembly

#### IMPORTANT

Lubricate the bore which takes the roller bearings.

Pumps constructions AP : Do not lubricate, the bearings are lubricated for life.

Pumps constructions CP : Bearings to greased and mounted head-to-tail (seals on the outside).

Make sure that the seals **605**, **613** and the shaft seal are in good condition. Change them if necessary.

Place the seal **605** in the end plate **401**.

Make sure that the seal **613** is correctly positioned in the shaft seal **630**.

Refit the shaft seal **630** (a new one if necessary), in the end plate **401**, supported on the seal **605**.

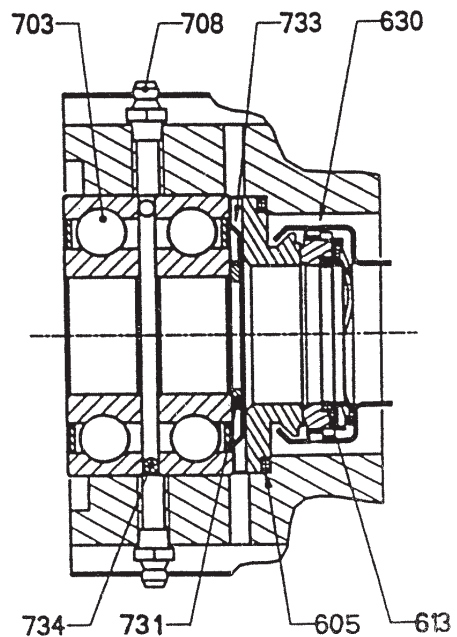
Place the protection ring **733** so as to be supported on the shaft seal **630**.

Place a bearing **703** supported on the protection ring **733**.

Position the spacer **734** with its aperture opposite a grease nipple **708** (if present).

Place the second bearing **703** so it is supported on the spacer **734**.

Refit the end plate (see § REASSEMBLY OF THE PUMP).



## 13. DISMANTLING AND REASSEMBLY OF THE BYPASS

### 13.1 Dismantling

Set bypass at minimal pressure by unscrewing the lock-nut **835** taking care to count the number of rotations so as to be able to reset bypass at initial pressure setting.

Unscrew the 3 screws **856** of the bypass cap **827**.

Remove spring **824**.

Remove the valve **823** by pulling its cylindrical section with the fingers.

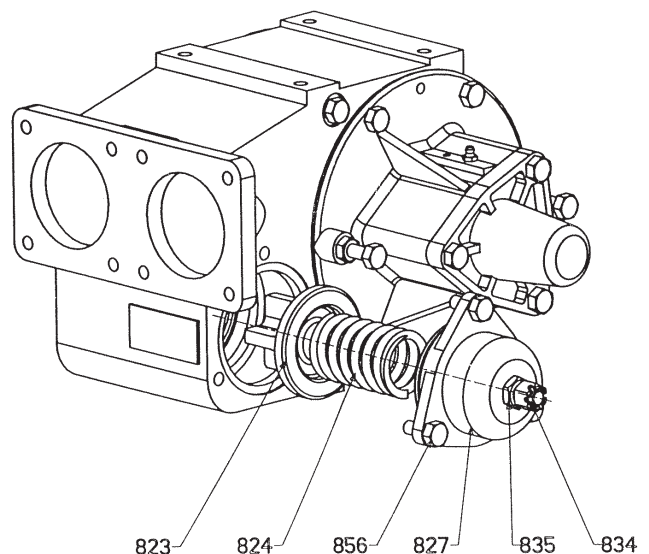
Check condition of bypass.

### 13.2 Reassembly

Clean all parts before reassembly.

Reassemble in reverse order of disassembly.

Set bypass at initial pressure setting by tightening nut with the same number of rotations as counted during dismantling.



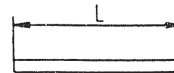
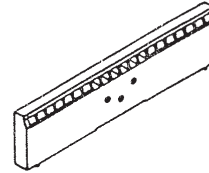
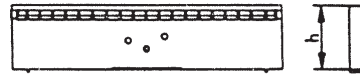
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## 14. MAINTENANCE

### 14.1 Inspection of the vanes

| Pump   | DIMENSIONS OF THE VANES - mm |                      |
|--------|------------------------------|----------------------|
|        | Original height "h"          | Change when "h" < to |
| CC8-40 | 31,0                         | 29,0                 |
| CC8-50 | 31,0                         | 29,0                 |
| CC8-65 | 35,3                         | 33,3                 |

| Pump   | DIMENSIONS OF THE PUSHRODS - mm |                      |
|--------|---------------------------------|----------------------|
|        | Original lenght "L"             | Change when "L" < to |
| CC8-40 | 82,5                            | 82,0                 |
| CC8-50 | 85,0                            | 84,5                 |
| CC8-65 | 85,4                            | 84,9                 |



### 14.2 Lubrication of bearings

Pumps constructions AP : Do not lubricate, the bearings are lubricated for life.

Pumps constructions CP : Foresee periodic lubrication of bearings (see GENERAL INSTRUCTIONS).

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## 15. STORAGE CONDITIONS

The equipment must be systematically stored in an area sheltered from bad weather.

If installation is interrupted, put back in place the original protective components or equivalent components.

The equipment must bear its original protective components until it is installed in its final application.

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## 16. SCRAPPING

The pump must be scrapped in compliance with the regulations in force.

During this operation, particular care must be paid to the drainage stages of the pump.

# 17. CERTIFICATE OF CONFORMITY



## CERTIFICATE OF CONFORMITY CE

**Mouvex**, ZI La Plaine des Isles - Rue des Caillottes - 89000 Auxerre France, declares the following equipment :

- Set-up :  Pump / Compressor « bare-shaft »  Pumping Unit / Compressor Unit
- Type :  Eccentric Disc Pump  Vanes Pump  Lobes Pump  
 Peristaltic Pump  Centrifugal Pump  Other Pump  
 Screws compressor  Vanes compressor  Hydraulic cooler

Designation : \_\_\_\_\_ s/n° : \_\_\_\_\_

According to the specifications recorded in the file N° : \_\_\_\_\_

is in conformity with the provisions of the following Directive :

- « **MACHINES** » **Directive 2006/42/EEC** as transposed by the national legislation, concerning safety equipments and arrangements relative to mechanical and electric risks applicable to rotative machines.  
NF EN 809:2009      NF EN 1672-2:2009      NF EN ISO 13857:2008      NF EN 12162:2009

And with the following marking :  **II2 G c IIB-T4      Max T° Flow = 80°C**

is in conformity with the provisions of the following Directive :

- « **ATEX** » **Directive 94/9/EC** (23 march 1994) as transposed by the national legislation, concerning equipment intended to be used in explosive atmospheres. Conformity obtained by application of the standards :  
NF EN 1127-1:1997      NF EN 13463-1:2009      NF EN 13463-5:2009

ATEX Certification delivered by INERIS, Notified Body (INERIS - Parc Technologique Alata – 60550 Verneuil-en-Halatte - France).

The equipment indicated above must be used according to the foreseen use by its design and its manufacturing, and according to the current standards.

We, undersigned, declare that the concerned equipment is in conformity with the Directives listed above and in the applicable standards in force.

For Mouvex SAS Company.  
Date : \_\_\_\_\_



Quality Manager

**MOUVEX sas** : Z.I La Plaine des Isles – 2, rue des Caillottes - 89000 AUXERRE – France – SAS au capital de 8 496 855 €  
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[www.mouvex.com](http://www.mouvex.com)