| Installation and Instruction<br>取　扱　説　明　書 | SAGINOMIYA SEISAKUSHO,INC. | Checked by | drawn by | date<br>NOV. 2005 | Name<br>Solenoid Valve<br>For Refrigerant | Catalog Number<br>NEV-803DXF<br>NEV-1204DXF<br>VPV-803DQ50<br>VPV-1204DQ50 | Drawing Number<br>A-EV-33010 |
|---|---|---|---|---|---|---|---|

**A. Failure to read and follow all instruction carefully before installing or operating this solenoid valve could cause personal injury and/or property damage. Save these instructions for future use.**

## B NOTE FOR SAFETY

### ⚠ Warning

- ●When removing the solenoid coil from the valve body, be sure to cut out the power supply as the coil may burn.
- ●Do not apply the different voltage from the voltage marked on the coil label. It may cause burning or failure.
- ●While power is on, do not touch the housing cover as personal injury may be caused. (Coil heats up to 90℃)
- ●Do not apply excessive force and/or any impact to the coil as it may cause valve failure, burn-out and leakage trouble due to deformation.
- ●Do not heat up the solenoid coil as the coil might be burn-out.
- ●Do not put any inflammable thing around the coil as it could catch fire due to the coil heat.

## C SPECIFICATIONS

As for the following specification,there is a case different from indication of a product. Note : SI unit {Metric unit}

- Min Bursting Press. 4.95 MPa {50.5kgf/cm²}(※1,※2)
  6.23 MPa {63.5kgf/cm²}(※3,※4)
- Airtight Pressure 3.3 MPa {33.7kgf/cm²}(※1,※2)
  4.15 MPa {42.3kgf/cm²}(※3,※4)
- Max Working Press. 3.3 MPa {33.7kgf/cm²}(※1,※2)
  4.15 MPa {42.3kgf/cm²}(※3,※4)
- Max Operating Press Diff. 2.06 MPa {21kgf/cm²} (※1,※2)
  2.75 MPa {28kgf/cm²}(※3,※4)
- Min Operating Press Diff. 9.8 kPa {0.1 kgf/cm²}(※1,※3)
  14.7 kPa {0.15kgf/cm²}(※2,※4)

※ The above figure represents pressure at Rated Voltage.

※1・・・NEV-803DXF　※3・・・VPV-803DQ50
※2・・・NEV-1204DXF　※4・・・VPV-1204DQ50

- Ambient Humidity 95%RH or less
- Coil insulation Class B molded
- Fluid Fluorinated Refrigerant (Please contact Saginomiya when other kind of refrigerant is used.)
- Fluid Temp. -30 to +120℃
- Ambient Temp. -30 to +50℃
- As explained in NOTE For SAFETY, coil may burn out at an abnormal condition. Use a suitable fuse.
- To keep temperature of coil less than 130℃ taking ambient temperature,fluid temperature and exoergic of coil into consideration.
- Install coil place where do not splash with rain and drop water from condenser piping.
- Do not use coil under the freezing condition.
- Operating voltage may rise when internal part of the body is filled with "Liquid refrigerant" or in case there is too much "Oil". Please confirm before using product.
- We manuracture the product based on the specifications described in this drawing.Please check the safety and validity in the product design in consideration that the product is conformed to the system or not when using.

## E FEATURE AND APPLICATION

- These are Solenoid Valves for Refrigerant circuit in various Refrigeration and Air conditioning equipment and conforms to Refrigeration Safety Regulations.
- These valves are small solenoid valves of the normally closed and the pilot operated type.

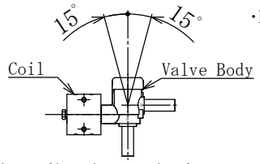
## F VALVE SELECTION

- Selecting most suitable valve for the equipment is important for better control.
  Refer to the above mentioned brief specifications of this Solenoid Valve.

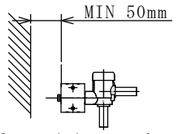
## G INSTALLATION

<Before Installation>

- Make sure that the supply voltage conforms to the voltage maked on the label.It may cause burning(or fuming) of coil ,or malfunction if incorrect voltage is supplied.
- Do not carry the valve with holding the lead wire only as it may cause coil burn-out.
- Be careful to scratch flared part and or brazing point as it might cause leakage trouble.
- Remove any foreign material or dust in the pipe as it may cause failure of the solenoid valve.
- Mounting position should be in the following range.



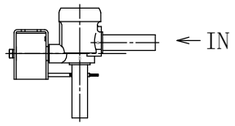

・Keep enough space above the coil to allow service and maintenance.




- Grounding is required at a suitable position on the unit.

<Installation>

- Check the direction of the fluid when install it.Install it as shown in the figure below so that the direction of the arrow may become the same.




- Mounting of the Valve Body and Piping connection should be tightly fixed.
- After connecting the Pipes, make air tight test.
- Do not install a check valve at the inlet side as it may cause liquid sealing condition on the pipe inside and may cause damage due to excessive pressure.
- Be sure to cool the body while soldering the tubes in order to keep the body temp under 200℃.Soldering must be carried out with the coil removed.It may cause valve leakage or malfunction.
- Prior to solder the tubes,fill inside the valve with inactive gas(such as nitrogen or carbonic dioxide) in order to avoid the generation of oxidescales.It may cause valve leakage or malfunction.
- Be careful that water dose not enter into the pipe. (Freeze up and Corrosion may cause to malfunction.)
- Special attention is required not to apply excessive force of compression, tension or torsion against the valve body as it may cause malfunction.
- In case of removing or changing the direction of the coil,tighten the fixing screw(M4×7) at 1.47～1.96N・m (15～20kgf・cm).If the screw is not tighten firmly,it may cause to be any noise or vibration.

<Operation>

- Before removing the solenoid coil from the valve body, be sure to cut the power supply. If energizing the coil itself while it is not assembled into the valve body, the coil may cause burn-out.
- When the direction of the fluid is a normal or either reverse direction and the pressure difference before and after the valve is low,the piston might generate the chattering noise.
- Only at de-energizing of use in the reverse flow direction is available.(The energizing use is not available.)

## H MAINTENANCE/INSPECTION

- In case of disassembling or inspection, please contact Saginomiya.
- Before making a maintenance or inspection for the valve, be sure to cut the power supply.

## I OPERATION CHECK

Install the Product correctly and then check its operation to confirm collect function of the whole system.

## J LIMIT ON APPLICATION

The product is not designed and manufactured for such equipment or system that is intended to be used under such circumstances as to relate to human life. For application requieing specially high reliability, please contact Company first.

## K SCOPE OF WARRANTY

Unless otherwise agreed by the parties, warranty period of the Product shall be one year after delivery.
In case of failure attributable to the Company within such period, the Product shall be repaired or repaired or replaced, provided that any one of followings are out of the warranty :

1. Improper handling or application by user
2. Modification or repair by other than the Company
3. Any failure to be caused by acts of God, fire, storm or the like, war,riot or the like and other causes beyond the control of the parties concerned.

Warranty described in this paragraph means the warranty for the Product itself and does not include warranty for any consequential damage arising out of or occasioned by a defect or failure of the Product.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