

Installation and Instruction 取扱説明書	<b>SAGINOMIYA SEISAKUSHO,INC.</b>	Checked by	drawn by	date MAY. 2001	Name Solenoid Valve For Refrigerant	Catalog Number IEV	Drawing Number A-EV-46002
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**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°C)
- 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. 4.41 MPa {45kgf/cm<sup>2</sup>}
- Max Working Press. 2.94 MPa {30kgf/cm<sup>2</sup>}
- Max Operating Press. Diff. 2.06 MPa {21kgf/cm<sup>2</sup>} [IEV-B1505DX, B2007DX=2.25MPa {23kgf/cm<sup>2</sup>}]
- Min Operating Press. Diff. 0.29 MPa {3kgf/cm<sup>2</sup>} [IEV-B1505DX, B2007DX=0.49MPa {5kgf/cm<sup>2</sup>}]
- Max (Min) operating pressure diff. is pressure difference between discharge pressure and suction pressure of compressor.
- Fluid Viscosity 50mm<sup>2</sup>/s
- Ambient Humidity 95%RH or less
- Fluid Temp. -20 to +125°C {IEV-B1505DX, B2007DX=-20~+120°C}
- Kind Of IEV
- Airtight Pressure 2.94 MPa {30kgf/cm<sup>2</sup>}
- Fluid FLUORO CARBON
- Coil insulation Class B molded
- Ambient Temp. -20 to +50°C

For Distributing Circuit (IEV-Type B)		For Changeover Circuit (IEV-Type C)	
Energized (ON) A → C	<p>A: Compressor Discharge Line B: Condenser Inlet Line C: Sub-Condenser Inlet Line (Or Evaporator Inlet Line) D: Compressor Suction Line</p>	Energized (ON) B → A	<p>A: Evaporator Outlet Line B: Compressor Discharge Line C: Compressor Suction Line D: Compressor Suction Line</p>
De-Energized (OFF) A → B		De-Energized (OFF) A → C	

- As explained in NOTE FOR SAFETY, coil may burn out at an abnormal condition. Use a suitable fuse.
- The Coil For IEV-B1505DX, IEV-B2007DX With The Thermal Cutoff Fuse Is Available Upon Request.

**D ELECTRICAL CHARACTERISTICS**

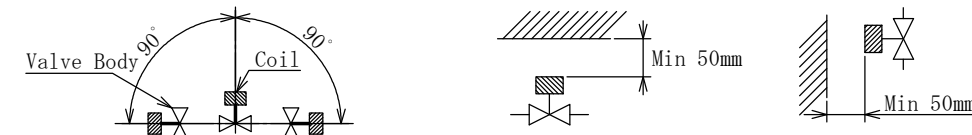
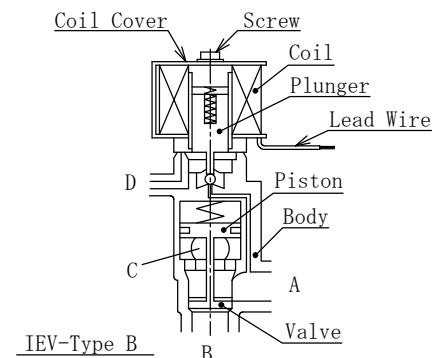
Type IEV-	Rated Voltage/Frequency	Running Current	Wattage	Coils	Proper Current Fuse
B1505DX	100V 50/60Hz	110/90 mA	6/5 W	AC100V coil	0.5A
	110V 60Hz	100 mA	6 W		
B2007DX	200V 50/60Hz	55/45 mA	6/5 W	AC200V coil	0.2A
	220V 60Hz	50 mA	6 W		
B32**DX	100V 50/60Hz	170/140 mA	8/7 W	AC100V coil	0.5A
	110V 60Hz	150 mA	8 W		
C32**DX	200V 50/60Hz	85/70 mA	8/7 W	AC200V coil	0.3A
	220V 60Hz	75 mA	8 W		

**E INSTALLATION**

<Before Installation>

- Confirm the supply voltage to conform with the voltage marked at the coil label on the housing cover.
- Be careful to select a refrigerant oil if viscosity of the oil exceeds 50mm<sup>2</sup>/s as it might cause failure of solenoid valve.

- 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.
- Use a mesh strainer (80 to 100 mesh) at the valve inlet.
- Mounting position should be in the following range. (The coil should always direct upward or horizontal.)
- Grounding is required at a suitable position on the unit.



<Installation>

- When installing the solenoid valve, be sure the arrow embossed on the valve body points the direction of refrigerant flow. (Be sure to correctly locate outlet and inlet side.)
- Special attention is required not to apply back pressure. Inner parts of valve may be deformed and may cause leakage trouble.
- 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.
- When brazing the joints, the valve body should be kept cool by wet rags in order not to heat up the valve body in excess of 120°C (Do not direct the flame to the valve body.)
- When brazing, valve inside should be filled with inactive gas (N<sub>2</sub> or CO<sub>2</sub>) to prevent generation of scale.
- Special attention is required not to apply excessive force of compression, tension or torsion against the valve body as it may cause malfunction.
- After putting the solenoid coil to the valve body and/or changing the coil direction, be sure to tighten the screw firmly. Proper tightening torque : 3N·m {30kgf·cm} [IEV-B1505DX, B2007DX=2N·m {20kgf·cm}]

<Operation>

- When removing the solenoid coil from the valve body, be sure to cut out the power supply as the coil may burn.
- 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.

**F 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.

**G OPERATION CHECK**

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

**H 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 requiring specially high reliability, please contact Company first.

**I 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 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.