Danfoss



Breakthrough in Control Solutions

## Modularity

The modular ICV concept provides a high degree of flexibility to create valves to suit various application requirements. The ICV concept comprises two main product groups, ICS servo valves and ICM motor valves.



Each valve body model is available with several different types and sizes of connections.

Different function modules offer a wide capacity range and function options, which can be installed in each valve body.

# Flexibility

The flexible ICV concept allows the capacity of the valve to be modified by simply replacing the function module. An upgrade from servo operated to digital actuator operation is achieved by fitting an ICM top cover assembly.



#### **Setting new standards**

Danfoss' extensive experience has been used to create a new valve concept which sets new and improved standards with respect to the demands required from control and injection valves.

#### **EXTENDED PRESSURE RANGE**

52 bar max. working pressure

**IMPROVED TIGHTNESS** Direct coupled connections

#### SERVICE FRIENDLY

A complete overhaul is performed by replacing the function module

- **DIRECT EXPANSION** Now also for Ammonia and Carbon Dioxide
- ADVANCED AND COMPACT Less space required and easy to install
- **ENHANCED PERFORMANCE** Speed adjustable digital actuator (ICM) and optimised regulating cone



## **Unique features**

ICV valves are manufactured with a series of unique features ensuring control, today and in the future.



## **Application examples**



The ICV provides a wide range of capacities for many different applications. The ICV can be used with all commonly used refrigerants including HFC and HCFCs.

#### **Application examples**





Dry expansion, liquid injection and hot gas injection using two ICM valves and hot gas relief and solenoid valve function using two ICS valves.





Liquid injection using an ICM in a high pressure plate heat exchanger system.





Danfoss has ensured, through extensive R&D work, laboratory and field testing, that the ICV valves are reliable control solutions, now and in the future.

# Integration

Danfoss provides a wide range of dedicated electronic controllers that can be used to regulate the ICV valves.



Speed adjustable digital actuator.

The actuator movement is transferred from its motor to the valve by a hermetcally sealed magnetic coupling, thus eliminating the need for a shaft seal arrangement and possible refrigerant leakage.

Danfoss can supply a wide range of dedicated electronic controllers that can be used to control your ICV.

The ICV can also be controlled using PLC's.

Danfoss not only allows the selection of the valve configuration but is also able to offer an electronic solution for most applications.

Danfoss provides support and advice on the selection and use of our components.



Upgrading of exisiting systems is possible using dedicated controllers which can be used to regulate and monitor the ICV valves via a PC.





## Experience

Danfoss has been a world class producer of control valves and pilot valves for more than 30 years. Our control valves are used in a wide range of applications.



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