

ENGINEERING  
TOMORROW

*Danfoss*

Brochure | Industrial Refrigeration

# High performing **products** for your **ammonia** and **CO<sub>2</sub>** applications

**100+**

applications covered  
with flexible,  
timesaving and  
simple modularity

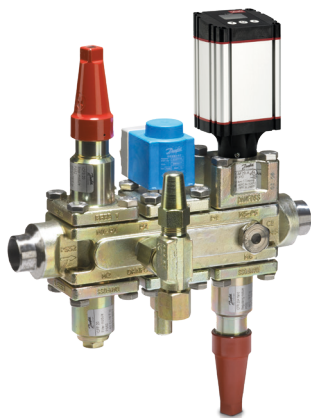
# One Supplier Covers your Industrial Refrigeration Needs

Danfoss has made a clear priority to be able to supply all types of components for industrial refrigeration. Having just one place to go for industrial refrigeration is a significant benefit. Danfoss' one-stop-shop concept makes constructing as well as servicing fast and easy and helps keep the part stock at a minimum.

Whether your industrial refrigeration plant is a manual system or a highly-automated system, you will be sure to find a Danfoss solution that exactly matches your project needs in our wide range for industrial refrigeration. With the support of our online tools and our dedicated, local staff, we continuously strive to make your selection of solutions safe and easy.

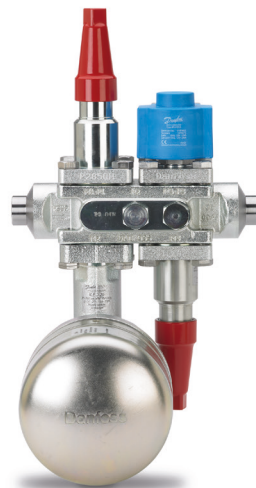
## The Flexline™ platform

The Flexline™ platform is synonymous with flexibility within industrial refrigeration. Based on a modular design concept, you will experience that each product features a variety of benefits, including easy selection, installation and maintenance.



### ICF Flexline™ valve station

The Danfoss ICF Flexline™ multi-ported control solution offers you significant savings by substituting a string of valves with just one valve station. Consisting of a valve housing and a maximum of four or six function modules, the valve station is a true plug-and-play solution.



### ICFD Defrost Module

The liquid drain method is widely acknowledged as the most efficient hot gas defrost method within industrial refrigeration. The method ensures that liquid condensate is drained at lowest possible pressure resulting in a reduction of blow-by gas by up to 90%.

## Support Tools for Professionals



**Coolselector®2:**  
Easy selection and calculation software



**3D CAD symbols:**  
Download symbols and illustrations



**DIRbuilder:**  
IR product configurator



**IR App:**  
Complete overview of spare parts and service kits



**IR Application Tool:**  
How a two-stage ammonia plant works



**Application Handbook:**  
How to select control methods for different refrigeration systems

## Training for Professionals



**Danfoss Learning:**  
Your personal learning portal is fast, easy and always accessible.  
[www.learning.danfoss.co.uk](http://www.learning.danfoss.co.uk)

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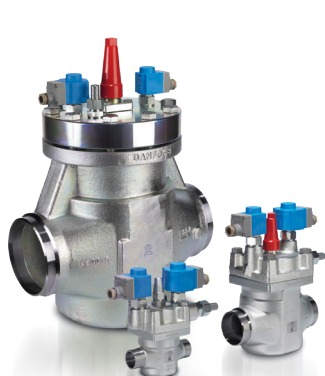


**Instagram**  
<https://instagram.com/DanfossCool>

### ICV Flexline™ valves

The ICV product family consists of an ICS pilot operated control, ICM motor operated control and ICLX 2-step solenoid valve. All valve variants are based on one common valve body to offer outstanding flexibility.

The modular concept greatly facilitates the building of a valve that offers energy savings and reduction of down-time. All valves are designed for a maximum working pressure of 52 bar (754 psi) and efficiently handle CO<sub>2</sub> and other future high pressure refrigerants.



#### ICLX 2-step solenoid valve

The ICLX valves are 2-step servo-operated main valves with pilot solenoid valves offering safe, flexible and convenient installation, operation and service.



#### ICM motor operated valve

The ICM motor operated valves are very compact and easy to handle. The ICM motor valve is available as a complete valve and as parts programme.



#### ICS pilot operated servo valve

The ICS pilot operated servo valves are quick and simple to handle, install and service due to their low weight and compact design.



#### ICSH, dual position solenoid valve

The ICSH dual position solenoid valve is designed for gradual and safe opening of the hot gas flow to the evaporator, featuring an extra-safety-configuration to prevent hydraulic shocks in the system.

## The Flexline™ platform

Your road to sustainability with Flexline™ is clear as lower life-cycle costs and emissions derived from leaks are further reduced thanks to its innovative design and carefully engineered valve ports. With Flexline™ you are guaranteed that your needs are accommodated by a reliable, safe and green solution – now and in the future.



#### SLV Flexline™ product platform

The SVL Flexline™ product platform is targeted to meet industrial refrigeration requirements worldwide. Using just two basic valve housings – a straightway and an angleway – the platform offers five different functions



#### Pilots valves for ICS valve

The line of pilots for ICS valves reduces the number of variants from eight to only four simplifying ordering, inventory management and storage. Pilot valves are ready for direct installation in the top cover of the main valve.

## Danfoss gas detection units for industrial refrigeration systems

The new Danfoss gas detectors are based on an intelligent platform and intuitive user-interface, Danfoss' complete line of fixed gas detectors range from basic to heavy duty models with sensor technology to match the specific refrigerant, application, and safety requirements of your system. The Danfoss gas detection portfolio enables you to comply with regulations according to EN 378:2016, ISO 5149:2014, IIR 2-2017, and ASHRAE 15:2016 while providing comprehensive safety and easy-to-use features



## Evaporator control solution

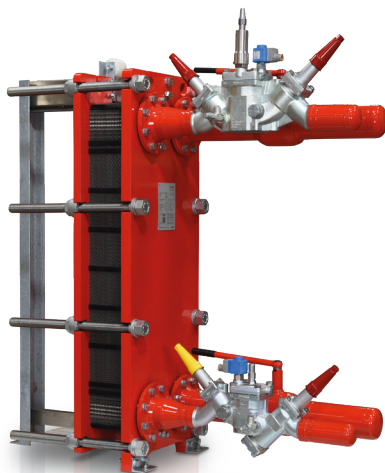
The evaporator sub-system solution brings together Danfoss' efficient and reliable valves and controls to provide efficient and safe installation, operation & maintenance of the evaporator sub-system.

The EKE 400 evaporator control solution is designed for industrial refrigeration applications. It controls the operation of the valves and the fans for each evaporator to achieve optimal cooling mode and defrost sequence for safe and trouble-free operation. The controller integrates with central PLC system, but can also work as an autonomous unit. An easy-to-use wizard including Danfoss valves enables quick set-up and efficient commissioning. Predefined defrost sequence based on IIR recommendations and Danfoss application knowledge offers a safe defrost process that meets latest IIR standards for hot gas defrost.



## Plate heat exchanger

The Danfoss heat exchanger solution combines our new semi-welded plate heat exchanger with Danfoss valves and controls providing a solution engineered with Industrial refrigeration in mind. The Semi-welded heat exchanger portfolio features enhanced safety features, excellent heat transfer capabilities and easy handling and maintenance.



## Air purger

The Danfoss intelligent purger system is a new, stand-alone air purger solution able to handle up to 8 purge points. The automatic purging function, responds immediately to non-condensable gases in the refrigeration system improving system efficiency and safety. With a compact, plug & play design it provides fast and easy installation, saves space and reduces overall cost.



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