ENGINEERING
TOMORROW

Danfoss

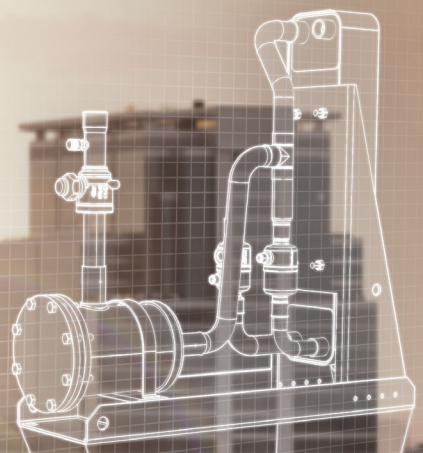
Danfoss pre-assembled Economizer

Boost your system efficiency while reducing costs

The Danfoss Economizer supports an increase of efficiency for A/C and W/C chillers with a capacity ranging from about 20 to 260 TR with R134a. As the Economizer comes pre-assembled, it reduces the development costs of OEMs, making it the obvious choice for professionals with an ambition to set new standards.
It also offers oil-free system compatibility.

Global Footprint

Production in Mexico, China, and Europe



airconditioning.danfoss.com

The Danfoss Economizer offers a wide range of functionalities, and benefits

An Economizer is a sub-system that allows you to reduce energy consumption and boost the efficiency of chiller systems. With its compact design and optimized modules, the Danfoss Economizer offers a reliable and efficient solution.

Danfoss offers:

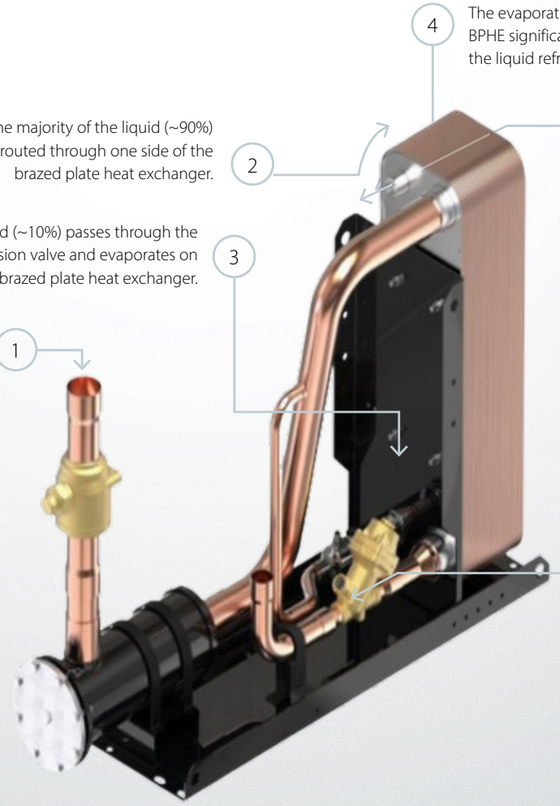
- **Global production footprint**—manufacturing lines in Mexico, China, and Europe
- Over **20 years of production excellence**
- **In-depth expertise** from component to application
- **Oil-free** system compatibility

Key Values for applying the Economizer

- **Improves system efficiency** with integrated and optimized modules for Economizer function
- **Increases savings on applied and development costs** because of reduced complexity on production, supplier management, and logistics
- **Enhances system reliability** as the Economizer is 100% pressure and leakage tested
- **Reduces the space required** due to its compact system design

How it Works

Economizer functions



Components engineered for the long run

The Danfoss Economizer portfolio is qualified for R134a. Additionally, it can also be used with the lower GWP alternatives: R513A and R1234ze.

ETS C – Colibri®

ETS C – Colibri® has been designed for precise liquid injection into evaporators for air-conditioning, heat pump, and refrigeration applications. In addition, Colibri® valves are approved for oil-free operation, e.g. in systems with Danfoss Turbocor® oil-free compressors.

- Fits easily anywhere in the system with its compact design
- Eliminates the need for extra support in your system to avoid tubing cracks caused by vibration thanks to its lightweight design
- Flexibility to install the valve in almost any plane with in-line design
- Reduces the potential refrigerant loss and number of service calls because of the uncompromising integrity of internal components and fewer leak points in the system

ETS L

ETS L and P are versatile ranges of expansion valves designed for optimal system performance. The ETS L series spans from 190 to 500 TR (650 to 1750 kW), while the ETS P series covers from 560 to 980 TR (1965 to 3460 kW). Our ETS L and P expansion valves are compatible with many A1 and A2L refrigerants. These valves are suitable for both traditional and oil-free systems, with variants for high-temperature applications. They run in bi-flow operations and offer a high serviceability. Supports 37 bar MOPD.

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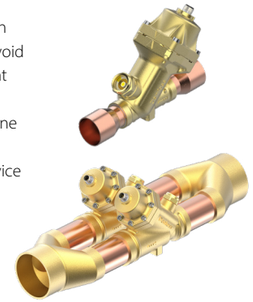

BPHE

The heat exchanger features innovative Micro Plate technology that improves heat transfer and reduces the amount of material used.

- High heat transfer and energy efficiency
- Reduces refrigerant charge with minimal hold-up volume
- Improves the chiller system efficiency with minimal pressure drop on the liquid side
- Reduces the product weight and the need for raw material
- Reduces carbon footprint thanks to lower CO_2 emissions
- Compatible with other Danfoss products and suitable for use in oil-free systems

GBC Ball Valve

GBC Ball Valves are manually operated bi-flow shut-off valves. They are used in various locations in the system to provide access for service during maintenance.

- A wide range of connections – from ¼in. to 3 ⅛in.
- High quality and reliability as they are designed to meet the highest burst and leak standards
- Full port designs ensure high Kv values and maximum system efficiency

DCR ELIMINATOR®

DCR ELIMINATOR® filter driers provide maximum moisture-removal capacity, excellent acid-removal characteristics, and an outstanding filtration capacity when used with Danfoss cores. It can be used in either the liquid or suction line of an air-conditioning or refrigeration system.

- Excellent design while commissioning a large system with semi-hermetic design and replaceable cores
- Easy accessibility of the cores with the bolt arrangement in the top cover of the shell
- Supports 46 Bar MWP and approved by PED and UL with the use of the robust steel shell
- All DCR shells are powder-painted to ensure maximum corrosion resistance. All shells are also helium leak tested to ensure system integrity
- Meets moisture, acid and dirt removal requirements with the wide range of core options

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Recommended Economizer selection

Oil and oil-free applications

	Econ1	Econ2	Econ3	Econ4	Econ5	Econ6
Capacity for R134a	Component	Component	Component	Component	Component	Component
System capacity	22 - 42 TR 78 - 148 kW	43 – 66 TR 151 - 232 kW	67 – 93 TR 236 - 327 kW	124-153TR 435-540kW	157-215TR 550-756kW	226-264TR 795-930kW
Economizer capacity	5 TR / 18 kW	8 TR / 28 kW	11 TR / 39 kW	18TR/64kW	26TR/90kW	32TR/112kW
Heat Exchanger	C62-EZ-40	C62-EZ-60	C62L-EZ-114	C62L-EZ-140	C118-E-62	C118-E-80
Primary EEV	ETS 50C	ETS 100C	ETS 100C	ETS 250L	ETS 250L	ETS 400L
Economizer EEV	ETS 12C-22	ETS 12C-22	ETS 24C-22	ETS 24C-22	ETS 50C	ETS 50C
Filter Drier	DCR 04811s-DM	DCR 04813-DM	DCR 09617-DM	DCR 09621S-DM	DCR 09621S-DM	DCR 19217s
Ball Valve	GBC 35S	GBC 42s	GBC 54s	GBC 67s	GBC 67S	GBC 67S

Conditions: T liq. from condenser: 42 °C / 107.6 °F - T sat. of economizer: 22 °C / 71.6 °F - T app.: 3 °C / 5.4 °F
Danfoss Economizer models according to their suitability for specific chiller capacities. The exact selection will depend on the customer's specific requirements.
* For further information, expecially regarding the refrigerant availability and compatibility with oil-free systems, please contact your Danfoss sales representative.

Your source for chiller systems

Our portfolio covers up to 70% of the products your chiller needs, offering you a powerful combination of expertise and product options that will enhance your chiller designs and increase your bottom line.