Danfoss ICLX two-step servo-operated main valves

A superior solution of safety and convenience

The Danfoss ICLX valves are 2-step servo-operated main valves with pilot solenoid valves. From DN 32 up to DN 150, ICLX valves use an external pressure connection for opening (which means that no opening pressure difference across the ICLX valve is required).

52 bar working pressure

With a maximum working pressure of 52 bar, ready for CO₂ and future high pressure refrigerants

80% leak risk reduction

When compared to traditional flanged connections, the welded connection of ICLX valve offers a higher safety level, by reducing the risk of leaks over 80%
ICLX opens in two steps:

- Step one opens to 10% of the capacity, when the pilot solenoid valves are activated.
- Step two opens automatically after the pressure differential across the valve reaches 1.25 bar.

**Features**

- Standard ICV Flexline™ housing realizes the real flexibility, a true plug and play solution with easy and timesaving switch between the functions.
- Full hermetic external tightness ensures no leakage.
- Normal closed type could minimize the system risk.
- Direct weld eliminates pipe flanges to increase system safety and simplify the installation.
- Outstanding flow characteristic ensures the 0 bar's opening, especially suitable for systems where low pressure drop is required.
- Easy change over between the two steps & one step function.
- Simple installation as only one control signal is needed.
- No hot gas leakage to the suction line due to teflon valve plates and gas tight piston rings.
- Short closing time by optimal design with small hot gas chamber.
Technical data

- **Dimensions**
  DN 32 to DN 150

- **Refrigerants**
  Can be used for all normal, non-flammable refrigerants, including R 717 (NH₃) and R 744 (CO₂), and non-corrosive gases/liquids - assuming seals of the correct material are used. Use with flammable hydrocarbons cannot be recommended, please contact Danfoss

- **Temperature range**
  –60/+120°C (–76/+248°F)

- **Surface**
  The external surface is zinc-coated to give good protection against corrosion

- **Pressure range**
  The valve is designed for
  Max. working pressure: 52 bar g (754 psi g)
  Test pressure: 104 bar g (1508 psi g)

- **Opening differential pressure**
  Min. 0 bar g (0 psi g) as valve is kept open by external pilot pressure
  Max. (MOPD):
  - ICLX 32-150  28 bar* (400 psi)
  - ICLX 32-150  40 bar** (580 psi)
  * External pressure is 1.5 bar (20 psi) higher than inlet pressure on the ICLX valve
  ** External pressure is 2 bar (30 psi) higher than inlet pressure on the ICLX valve

Standard applications

ICLX are used in wet return and suction lines for the opening against high differential pressure, e.g. after hot gas defrost in large industrial refrigeration systems with ammonia or fluorinated refrigerants.
Danfoss Flexline™

Designed to offer clever simplicity, timesaving efficiency and advanced flexibility the Flexline™ series includes three popular product categories:

ICV Flexline™ – Control valves
ICF Flexline™ – Complete valve stations
SVL Flexline™ – Line components

All products are based on a modular design with no functionality in the housing. This set-up reduces complexity right from the design phase to the installation, commissioning and service. All key to lower total life cycle costs – and major savings.

Go to www.danfoss.com/flexline for more information on the Flexline™ platform.

Global knowhow
Local support

Backed by more than 60 years of experience producing valves and controllers for industrial refrigeration applications Danfoss is a solid partner to turn to when you are looking for quality components.

Our global knowhow combined with local support offers you the best possible products and service.