



Cooling Info

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Refrigeration and Air Conditioning Controls

New perspectives with Danfoss Saginomiya

Saginomiya Seisakusho Inc. and the Danfoss Group entered into a joint venture in 2002. We can now state that the cooperation works very well and, as a result, the factory which manufactures the small cartridge type pressure controls (CC) in Poland will shortly increase its production capacity by 30%. In addition to these CC controls (on a license basis), the Polish branch also takes care of the European distribution of condenser fan speed controls, flow switches and 4-way reversing valves. An explanation of two products is given below.

Cartridge Pressure Controls (CC)

The cartridge controls are normally produced according to customer specifications and are a typical product for OEM customers where large volumes are commonplace. To satisfy small order volumes (wholesaler stock), a small range was selected based on the widest area of usage. 22 items from the ACB range were chosen and are available for sale in 20 piece-packs (or multiples there of).

Facts

- These CC's are used throughout the world by the most important manufacturers.
- More than 100 million CC's have now been installed.
- The average percentage rejection rate after installation over the last 5 years is 1.54 ppm.

- Reliable and quick delivery within Europe thanks to production in Poland.

Characteristics

- Spade or cable connection versions available.
- NC or NO contact system.

- Contact load up to 6 A.
- Automatic or manual reset versions available.
- CE, TUV, VDE, UL and C-UL approved versions available.
- Solder & Female flare connection versions available.



You can receive more information about the mini-pressostats, speed regulators, flow switches and 4-way valves from Danfoss Saginomiya by completing and returning the enclosed form.

- Pressure range from 0.45 to 45 bar.

In addition to the ACB type, which is suitable for medium to high pressure ranges, there is the LCB type, which is suitable for low pressure ranges.

RGE Condenser Fan Speed Control

These regulators ensure a constant condenser pressure for air conditioners, cooling batteries, etc. which are in operation throughout the entire year and which can be subjected to large fluctuations in load and ambient temperature. A constant condensing pressure can be obtained by varying the speed of the condenser fan motor(s).

Facts

- Reduces the risk of a low condensing pressure during the winter months, if using oversized condensers.
- Flash gas formation (bubbles) in the liquid line is avoided when turning on the fan motor(s).
- Easy to install, set up and very reliable.
- Fan noise can be kept to a minimum.

Characteristics

- All-in-one design: pressure gauge and regulator in a single housing.
- Reliable pressure gauge (bellows mechanism).
- Simple to install and configure.
- Suitable for most commonly used refrigerants.

- IP 54 rated.
- CE/EMC approved.
- Required minimum current of only 0.2 A.
- Selection switch for minimum speed or cut-off of the fan motor.

Design

- Single or three-phase design.
- Contact load 1-phase models: 2, 4, 6 or 8 Amp.
- Contact load 3-phase models: 5 - 7 Amp.
- Also available without a housing for use in control panels.

Refrigeration and Air Conditioning Controls

New DCR filter driers: working pressures up to 46 bar !

Danfoss introduces a new generation of DCR Eliminator® filter driers with replaceable solid cores. The filter housings meet increasingly higher demands, such as higher working pressures when using R410A or CO2 as a refrigerant. It is also possible to choose from a large variety of designs, so that you can always choose the combination which best suits your needs.

Characteristics

The filter housing and the core holder are made from steel. Danfoss uses the latest manufacturing techniques, where every DCR undergoes a number of thorough test procedures in accordance with the strictest standards (e.g. a helium leak test) during the production process. The surface of the filter housing is treated with zinc phosphate to protect it against corrosion. The 'finishing touch' is a corrosion-resistant powder coating.

Customized solution

The filter housing and drier core are easily assembled and so can be custom sized to suit the application.

- The filter housings are available in 1 or 2 core options offering a wide range drying capacity.

- The connection options are 5/8" to 2 1/8" solder and 1/2" to 2" weld.
- There are two end plate options: blank plate or plate with service port.
- Danfoss is the only manufacturer to provide special versions for a maximum working pressure of 46 bar.

The filter housings are available as a complete unit either with or without the end plate. There is also the option of ordering the constituent items as spare parts.

If you require further information about the new DCR filter driers, please complete and return the enclosed form.



Refrigeration and Air Conditioning Controls

Universal, replaceable solid cores suitable for all filter housings

The various manufacturers of filter driers with replaceable solid cores use different seals. Danfoss is the only manufacturer to include every possible seal in the packaging of its exchangeable cores. As a result, servicing is easier and less stock is required.

48-DM core properties

- Made from 100% molecular sieves.
- Very high drying capacity at both low and high condensing temperatures.
- Suitable for all HFC refrigerants in conjunction with POE and PAG oil.
- Oil additives are not adsorbed, so the oil retains all of its lubricating properties.

74 kg of R404A can be dried with one 48-DM drier core. This negates harmful acid formation because any moisture present is adsorbed.

48-DC core properties

- Mix of molecular sieve and activated alumina.
- Adsorbs both moisture and acid in the entire system for the full temperature range.
- Recommended for use in combination with mineral oil and alkyl-benzene oil and suitable for use with CFC, HFC and HCFC refrigerants.

48 DA burnout filter

- Protects replacement compressors against moisture, acid, dirt and other damaging substances typically present after a compressor failure.

- Suitable for use with CFC, HFC and HCFC refrigerants.

48F filter insert with a gauze

- Filters out particles larger than 15 µm.
- For use in liquid and suction gas lines.
- Suitable for use with fluorinated refrigerants.



Refrigeration and Air Conditioning Controls

GBC ball valves: ultimate ease of use without the loss of pressure

Ball valves fill an isolated and often undervalued role in a cooling system. The benefit of a ball valve usually only becomes obvious if repairs must be carried out or if system expansion is planned, because it is then necessary to quickly and easily isolate an installation section. Quality and usability are important parameters in the selection of ball valves. A ball valve must not leak, must not cause a loss of pressure and must have maximum usability. GBC ball valves from Danfoss meet these conditions.

Always include the necessary ball valves in the correct locations when designing your installation. If maintenance has to be undertaken on a section of the installation that cannot be isolated using a ball valve, this often results in considerable refrigerant loss and other related problems. The price of a high-quality ball valve, such as the GBC ball valve, is then outweighed by the clear advantages it offers.

The GBC ball valves have maximum usability

- For all fluorinated refrigerants (CFC/HCFC/HFC).
- Suitable for liquid, suction and hot gas lines.
- With a maximum operating pressure (PS/MWP) of 48 bar (test pressure = 62 bar).
- Operating temperature range of -40° C to +150° C.
- UL, CSA and CE approved.

GBC ball valve properties

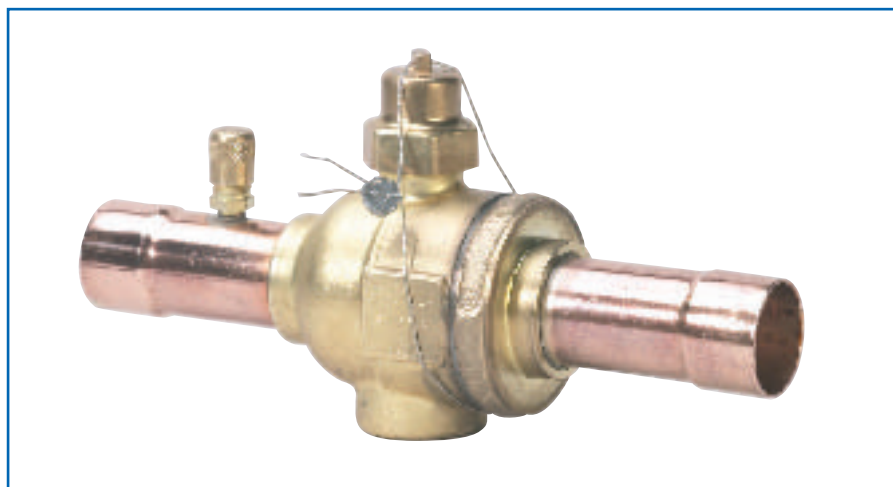
- Hermetically welded construction reduces the chance of refrigerant leaks.
- Extended solder connection for simple assembly.
- From fully open to fully closed in a quarter of a turn.
- Lockable one-piece cap (satisfies European safety directive EN378).

GBC advantages

- Zero or negligible pressure drop.



- Bi-directional.
- Valve seal made from special Teflon to guarantee the best seal and a long life span.
- Patented (double) seal of the spindle.
- Available with a service connection (Schraeder valve).



If you would like to know more about our GBC ball valves, please complete the form and return it to us. Alternatively, please contact your local Danfoss sales company or why not visit our website: www.danfoss.com

How to contact the refrigeration division at Danfoss Ltd:

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In addition details of all our products, news and information can be found on our web site <http://www.danfoss.co.uk>

Danfoss in general

Visit Danfoss at IKK 2004

Just as in every other year, Danfoss will again be present at the IKK trade fair. The International Refrigeration, Air Conditioning and Ventilation Trade Fair will be held from 13th to 15th October in Nuremburg, Germany. Danfoss looks forward to seeing you at stand numbers 101, 102 and 204 in hall 4.

The IKK trade fair is one of the largest refrigeration, air conditioning and ventilation fairs in Europe and is the ideal opportunity to see what is currently on offer in the market, including controls, solutions and systems which Danfoss can supply to you in your sector.

As a prominent manufacturer with a complete range of refrigeration components and systems, Danfoss will present a number of innovative products and developments.

A short summary is given below:

- A totally new valve concept type ICV.
- New filter driers with a replaceable solid core type DCR.
- A new generation of electronic EKC regulators.
- Expansion of the compressor range.
- New products from Danfoss Saginomiya.

Reason enough to visit us !

Do not forget to visit the Installer Corner which we have included especially for you.



For more information, please visit the trade fair's website at www.ikk-tradefair.com or contact your local Danfoss branch.