

Standard products for smoother business

MicroChannel Heat Exchangers - MCHEs



STAY COOL

It's easier than you think!

WE MAKE IT EASY FOR YOU

A quiet revolution is underway in the world of cooling. The introduction of MCHC condensers, which combine resource and energy efficiency with minimal use of refrigerants, is enabling the development of leaner, greener solutions. Understandably, MCHCs are in demand! Yet most MCHC suppliers today require a minimum order volume. What happens if you only need a few condensers, for example to try out in a prototype product or to fulfil a customised order of your own? With our standard MCHCs, it's simple.

A SELECTED RANGE FOR COMMON APPLICATIONS

Select one of our standard MCHC products, which are optimised for specific applications, and you can buy any quantity of condensers, any time, large or small. Our factories are set up to produce a range of different application-specific MCHCs, which you can adjust to meet essential requirements with a minimum of effort.

A SIMPLE GUIDE FOR SELECTION

Our standard products are adapted for use in the areas below (see details on page 4). Select which area is most relevant to your business, choose the desired size of condenser and the capacity in kilowatts required ...then simply place your order. With logistics centres in the US, Denmark and China, we can offer fast deliveries to any region.

Commercial A/C – Condensing Units – Air-dryers – Cold room – Cabinet cooling

AN OPPORTUNITY TO GET IT ALL

You can rely on us for a complete solution; not just the condenser itself but also every other component in the refrigerant circle (see illustration overleaf). The addition of MCHCs to our product offering means we are now able to complete the circle and supply all your refrigeration needs.

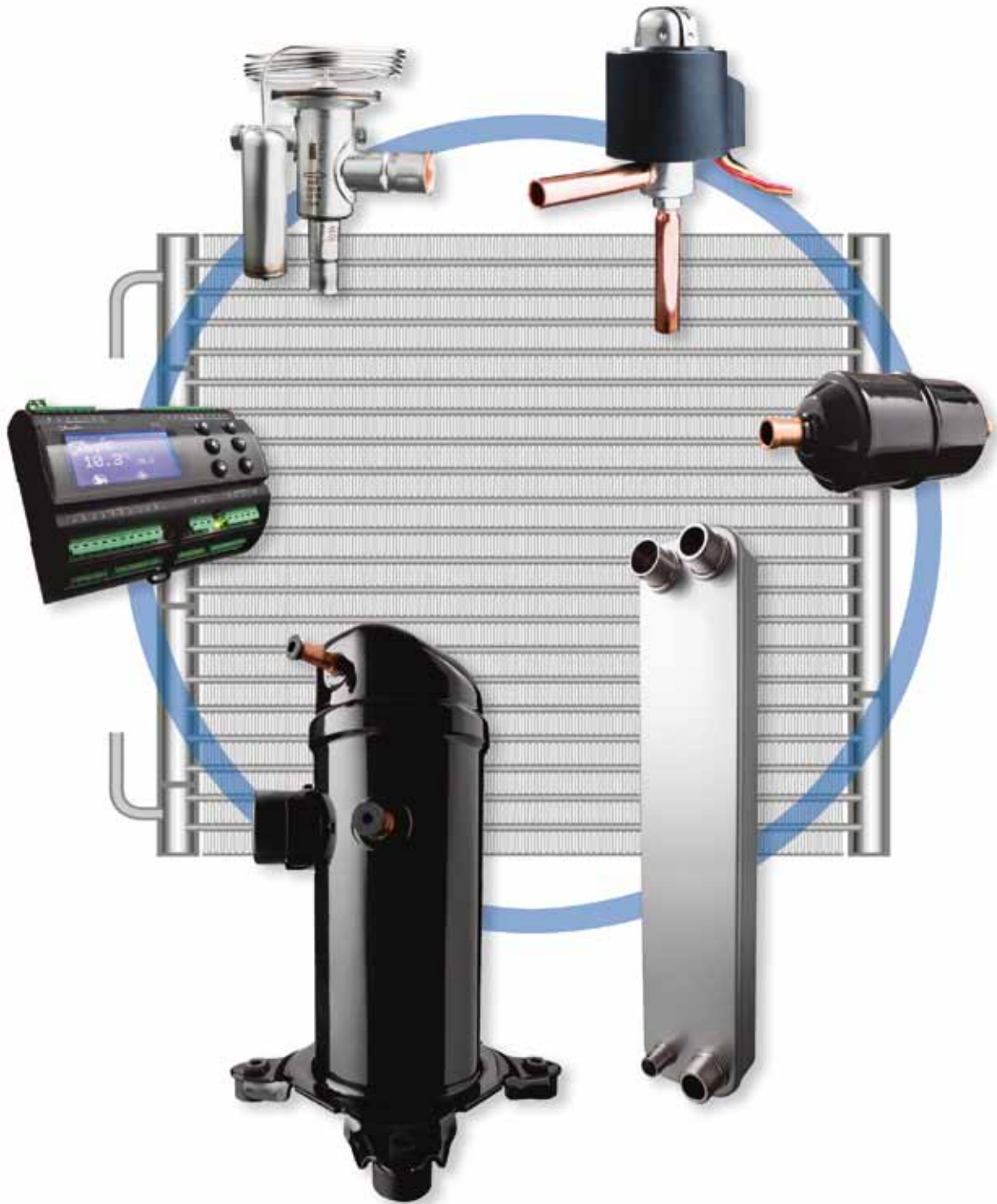
EXPERIENCE THE ENTIRETY

Draw on our broad experience of both the HVAC and refrigeration businesses. Our customers benefit from this knowledge in the form of superior heat exchanger products which enable the production of leaner, greener cooling systems. And we willingly share our expertise with MCHC customers around the world!



CIRCLE OF SALES

All in one

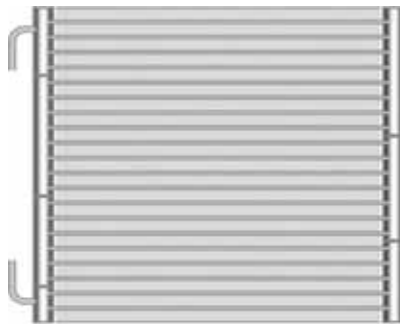


We have a long history (almost 100 years) of improving the efficiency of every component in the refrigerant circle. With the addition of MCHes, we are now able to complete this circle. Yet another good reason to source your components from us!



YOUR DEMAND – OUR SUPPLY

Good for the environment. Good for business



By greatly enhancing both efficiency and environmental performance, MicroChannel heat exchangers are completely changing the way we look at things. Choose from a range of standard products which give optimal results in your cooling application.

COMMERCIAL AC

MCHEs have a 30% lower refrigerant charge than F&T coils. When an MCHE is used as your condenser, this leads to significantly more environmentally friendly systems. As a manufacturer, that means you can meet legal regulations, get environmental certification and take advantage of 'green' tax incentives.

CONDENSING UNITS

MCHEs' excellent heat transfer raises the efficiency of your products, making it possible to build a high-performance range with a slimmer design (using the same frontal area). With compact, energy-efficient products, you save on material, transport and storage costs. At the same time, you increase the attractiveness of your offering to customers.

AIR DRYERS

When MCHEs are used in air dryers, their high efficiency and compact nature let you reach out to new customers. MCHEs offer both lower energy consumption and lower refrigerant charge, so you can develop cost-effective solutions with a strong environmental profile.

COLD ROOM

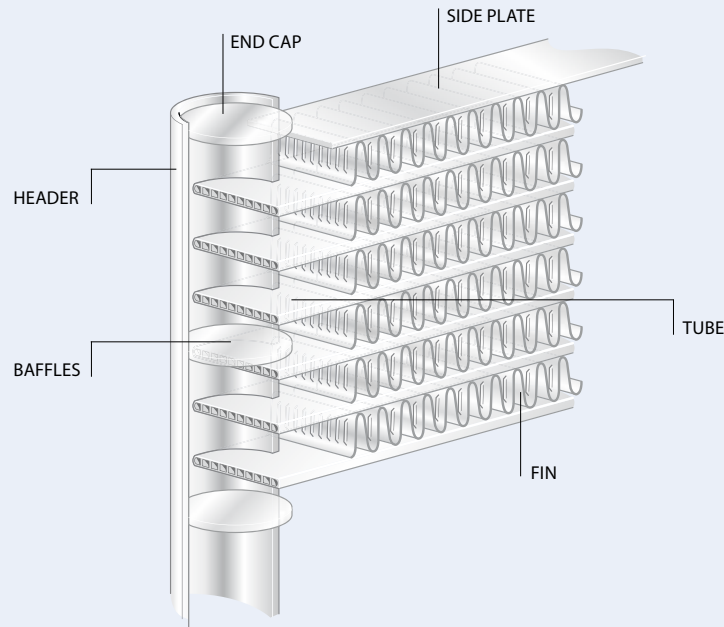
MCHEs offer a 10% better COP than F&Ts of the same frontal area, or the frontal area of the unit can be 25% smaller without reducing its effect and COP. Use MCHEs to produce neat, efficient systems that can be relied upon to keep cold store rooms at the right temperature, year-in year-out.

CABINET COOLING

Safeguard your customers' most sensitive technologies with our innovative, reliable MCHEs. Their excellent heat transfer lets you produce compact, energy-efficient units. Combined with a low hold-up volume and reduced refrigerant charge, this also means a significant reduction in CO₂ footprint.

INNOVATIVE DESIGN

Ingeniously simple



MCHEs have an ingeniously simple design - made entirely of all aluminium which is not only lightweight but also prevents galvanic corrosion. The refrigerant-carrying tubes are formed to optimise heat transfer, thus enabling the production of more compact, but equally effective cooling solutions. Meanwhile, their smart louvred fin design maximises surface contact, successfully reducing the air-side pressure loss, improving efficiency and reducing noise levels.

TUBE The ingenious design of the tubes gives superior heat transfer which, in turn, enables a more compact but equally effective solution overall.

FIN A superior louvred fin design maximises the surface contact. This reduces the air-side pressure loss and improves efficiency, as well as reducing noise levels.

HEADER In combination with baffles, MCHE headers control the flow of refrigerant and enable optimisation of the velocity in all phases.

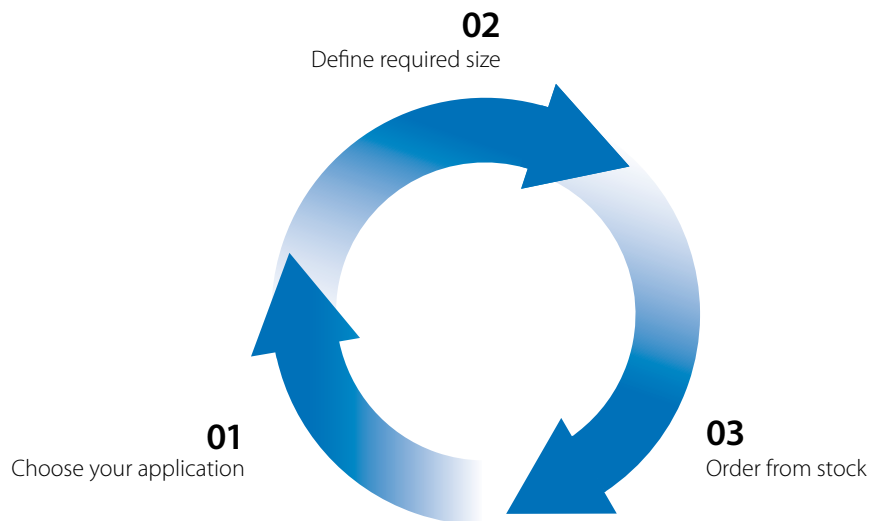
BAFFLE In combination with headers, MCHE baffles control the flow of refrigerant and enable optimisation of the velocity in all phases.

END CAP The end cap and the main body of the MCHE are brazed together to form one leak-free stable unit. Being made entirely of aluminium, the whole heat exchanger (including the end cap) is resistant to galvanic corrosion.

SIDE PLATE The side plates are formed in a way that facilitates installation using U-bars.

ORDERING IS EASY

Standard solutions



The whole idea of developing standard product ranges is to help your business move swiftly and smoothly into the MCHC future. Our ready-made, optimised heat exchanger solutions help you speed up product development and streamline production. If you have any queries, please feel free to contact us and we will help you choose a product that's most suitable for your business.

PERFORMANCE GUARANTEED

When you choose a new kind of heat exchanger for your application, you want to be sure it will perform smoothly. That's why, at our factory in China, we use every tool at our disposal to guarantee efficiency, quality, and ultimately the reliability of the product we deliver to you.

QUALITY ASSURED

In the production of MCHCs, we have adopted the high quality standards of the automotive industry. Every step in the production chain is quality-certified with ISO 9001 and TS16949. All the external parts used in our products are approved by third parties such as KHK, PED and UL.

MCHE STANDARD RANGE

Technical condenser specification

		SIZE H/L (mm)	kW	Model Name	PROD. CODE
COMMERCIAL AC R134a/R410A Delta T 12K Air velocity 2,5 m/s		771/800	10.6/12.0	D140SC-S (B)	021F0084(91)
		517/1074	12.7/14.6	D150SC-S (B)	021F0095(98)
		639/1300	14.4/18.5	D160SC-S (B)	021F0096(99)
		639/1324	20.0/24.5	D170SC-S (B)	021F0085(92)
		1213/1074	30.9/35.2	D180SC-S (B)	021F0094(97)
		1363/1274	41.6/51.2	D190SC-S (B)	021F0086(93)
CONDENSING UNITS R404A Delta T 12K Air velocity 3 m/s		301/330	1.9	D100SC-S (B)	021F0080(87)
		348/385	2.6	D110SC-S (B)	021F0081(88)
		432/460	4.2	D120SC-S (B)	021F0082(89)
		517/550	5.8	D130SC-S (B)	021F0083(90)
Additional Applications					
AIR DRYERS R134a Delta T 15K Air velocity 3 m/s		301/330	2.3	D100SC-S (B)	021F0080(87)
		348/385	3.2	D110SC-S (B)	021F0081(88)
		432/460	4.9	D120SC-S (B)	021F0082(89)
		517/550	7.1	D130SC-S (B)	021F0083(90)
COLD ROOM R404A Delta T 12K Air velocity 2,5 m/s		301/330	1.7	D100SC-S (B)	021F0080(87)
		348/385	2.3	D110SC-S (B)	021F0081(88)
		432/460	3.7	D120SC-S (B)	021F0082(89)
		517/550	5.1	D140SC-S (B)	021F0083(90)
		771/800	12.4	D130SC-S (B)	021F0084(91)
CABINET COOLING R404A Delta T 12K Air velocity 2,7 m/s		301/330	1.8	D100SC-S (B)	021F0080(87)
		348/385	2.5	D110SC-S (B)	021F0081(88)
		432/460	3.9	D120SC-S (B)	021F0082(89)
		517/550	5.5	D130SC-S (B)	021F0083(90)

ARI

CECOMAF

CECOMAF. Ambient 32 °C/MBP (-10 °C evap) /HBP (+5 °C evap) / 10 °C super heat / 0 °C sub cooling

ARI. Ambient 35 °C/HBP (+5 °C evap) / 10 °C super heat / 5 °C sub cooling



A NATURAL CHOICE – MICROCHANNEL HEAT EXCHANGERS

Our revolutionary MicroChannel Heat Exchanger technology enables us meet customer demands for clear, core savings and a better environmental performance. Our focus on customer solutions means we can identify the best way to help you meet current and future challenges – environmental, economic, legal or political - and help you develop your business.

Address

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without consequent changes being necessary in specifications already agreed. All trademarks in this material are the property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.