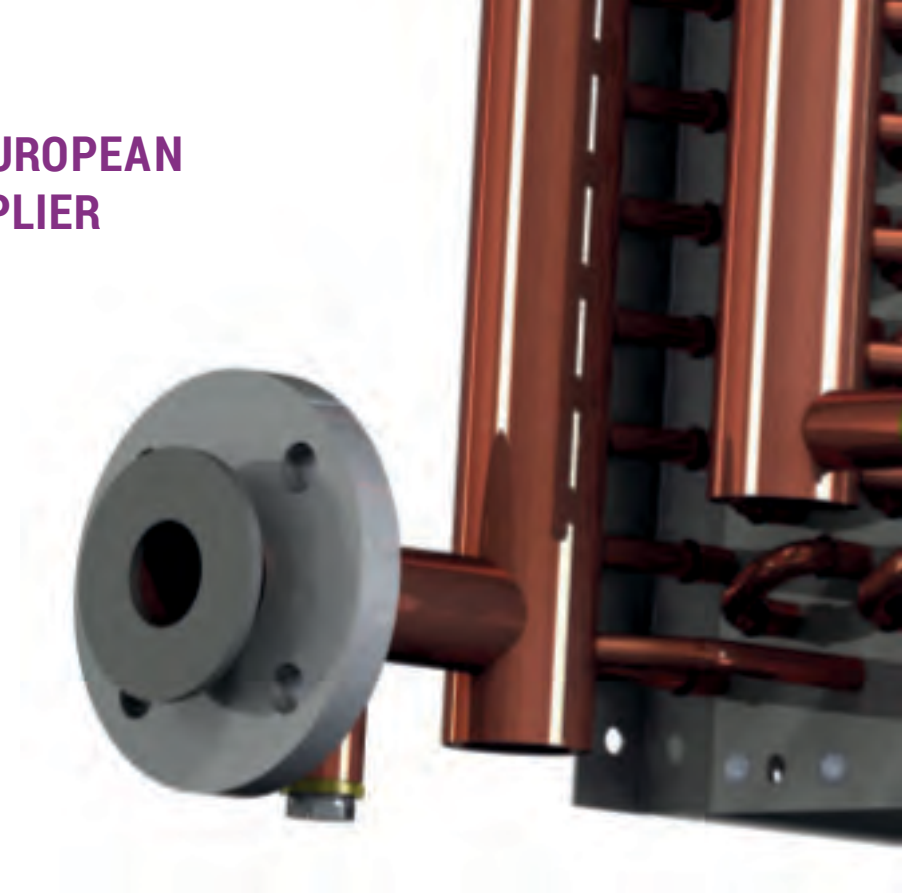




4COILS TECH ●

EXPERIENCE INSIDE

**4 COILS TECH - LEADING EUROPEAN
MANUFACTURER AND SUPPLIER
OF HIGH-QUALITY HEAT
EXCHANGERS.**

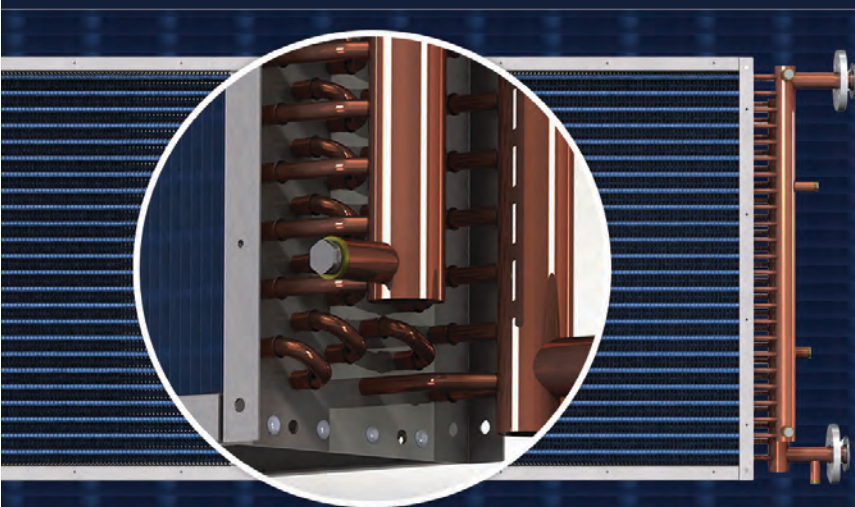


We produce tailor-made heat exchangers for small, medium and large customers in the heating, ventilation, air-conditioning & refrigeration sectors, both in the form of serial and one-piece production coils.

We provide a professional and flexible approach, a swift response and an openness to constant innovation.

WHY OUR COMPANY

- **SHORT LEAD TIME**
- **FAIR PRICE AND CONDITIONS**
- **PROFESSIONAL AND FLEXIBLE CUSTOMER SERVICE**
- **QUALITY STANDARDS AND TECHNICAL SUPPORT**
- **EXPERIENCED STAFF**
- **FLEXIBLE PRODUCTION FOCUSED ON CUSTOMER NEEDS**



- all our products are manufactured in our production plant in the **Czech Republic**
- strategic location of the manufacturing plant near a motorway junction and 20 minutes from **Prague international airport**
- more than **80 % of products** are manufactured for export in Europe, we supply to countries from Portugal to Russia and from Sweden to Greece, but also to North Africa or for the Middle East
- last year we delivered **133 000 products** to **39 countries** around the world
- thanks to the flexible system we are able to **manufacture thousands of series** as well as **one-piece orders**



QUALITY

Our quality control system, as well as our approach to the environment and working conditions of our employees, have been successfully certified by an independent company.

Our commitments in these areas are set out in the Quality, Environment and Health and Safety Policy.

As part of our way of thinking, which we call “Continuous Improvement Mindset”, we continue to work to further develop established processes as well as to create new and effective solutions.

WE HOLD THE FOLLOWING CERTIFICATES:

ISO 9001:2015 – Quality Management System

ISO 14001:2015 – Environmental Management System

ISO 45001:2018 – Occupational Health and Safety Management System

WE DECLARE COMPLIANCE WITH THE FOLLOWING EU REGULATIONS:

REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals)

Regulation (EC) No 1907/2006

Protection of human health and the environment within the organisation

RoHS (Restriction of the Use of certain Hazardous Substances in Electrical and Electronic Equipment)

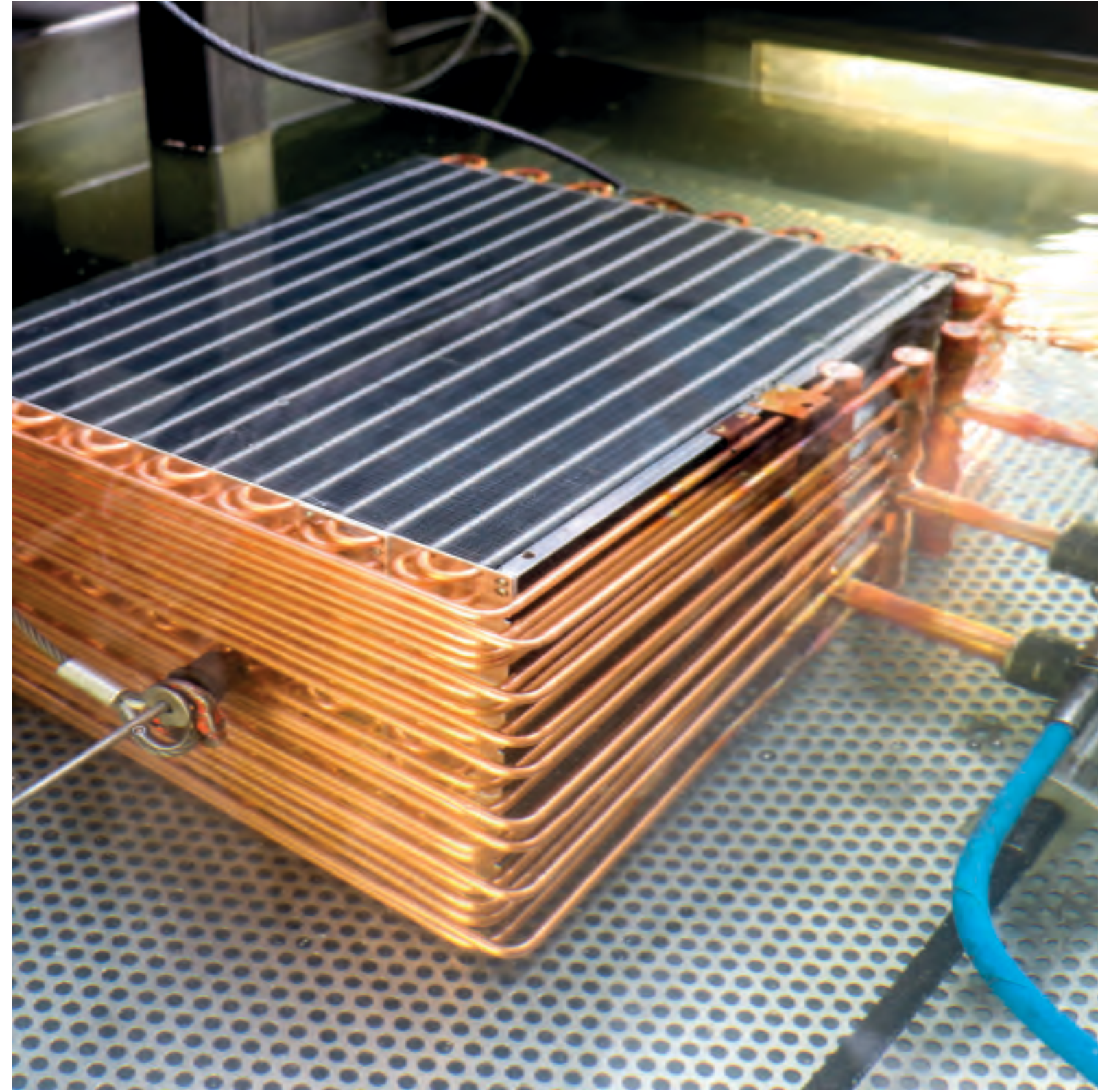
Directive 2011/65/EU + 2015/863/EU of the European Parliament and of the Council

The list of restricted substances (DEHP, BBP, DBP and DIBP)

PED (Pressure Equipment Directive)

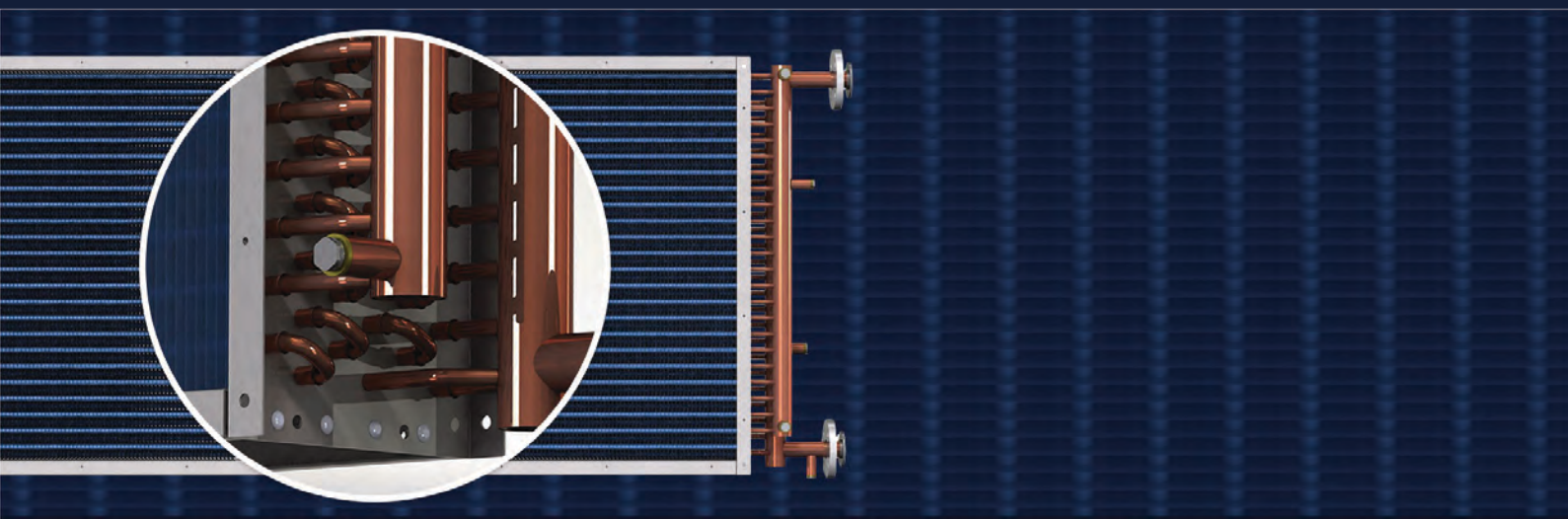
Directive 2014/68/EU of the European Parliament and of the Council

Harmonisation of the laws of the Member States relating to the making available on the market of pressure equipment



OUR PRODUCTS

- FLUID COILS
- EVAPORATORS FOR HVAC&R
- CONDENSERS FOR HVAC&R
- COILS FOR HEAT PUMPS
- GLYCOL COILS



PRODUCED COILS

- special solutions for food, agriculture and industrial segments, data centers or buildings facility
- custom-designed heat transfer coils to original equipment manufacturers (OEM)
- serial and one-piece production coils.

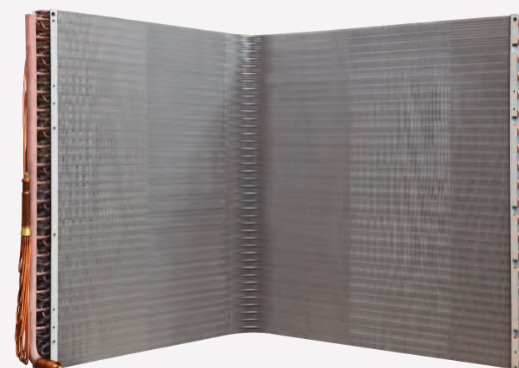
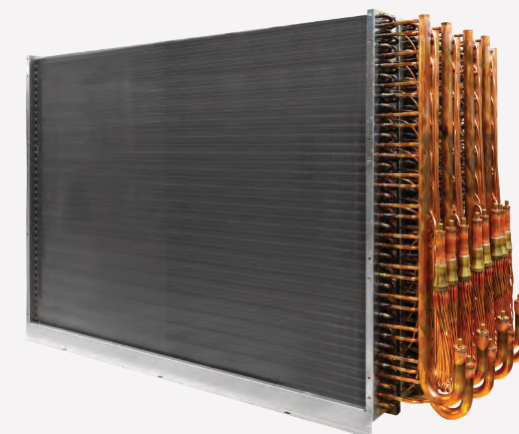
PRODUCT CATEGORIES (acc. to PED)

- SEP (SOUND ENGINEERING PRACTICE)
- CAT1 (Module A2 Assessment)

We manufacture in compliance with PED requirements, enabling us to issue a declaration of conformity and affix labels on the product label.

- CAT2 (Module A2 Assessment)

We collaborate with the notified body TÜV SÜD Czech s.r.o. to produce coils meeting PED requirements, allowing us to provide a conformity assessment and affix marking on the product label, including the notified body mark 1017 under the labels.



SPECIFICATION

Tube "D"	Geometry	"A"	"B"	Corrugations	
5.000 mm	0S1	20.00	17.32	G, P	
7.000 mm	1S1	25.00	12.50	G, P	
5/16" (7.937 mm)	2S1	25.40	19.05	G, R, P	
	2S9			E	
3/8" (9.525 mm)	3S2	25.40	19.05	G, P	
	3S9			E	
	3S3	25.00	21.65	G, P, E	
1/2" (12.700 mm)	4S4	40.48	34.93	G	
	4S6	31.75	27.43	G, R, P	
5/8" (15.875 mm)	5S4	38.00	32.91	R	

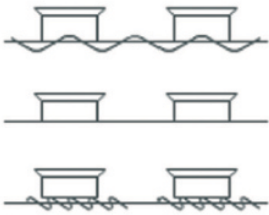
All measurement is in millimeters.

CORRUGATIONS

G, R – corrugated fin

P, S – plain fin

E – louvered fin



COPPER TUBE

DIAMETER	TYPE
5 mm	smooth
	grooved
7 mm	smooth
	grooved
5/16" (7.937 mm)	smooth thin-walled
	smooth thick-walled
	grooved
3/8" (9.525 mm)	smooth thin-walled
	smooth thick-walled
	grooved
	super grooved
1/2" (12.700 mm)	smooth thin-walled
	smooth thick-walled
	grooved
5/8" (15.875 mm)	smooth thin-walled
	smooth thick-walled

CASING

THICKNESS	SPECIFICATION
up to 3 mm	0.5 / 1.0 / 1.2 / 1.5 / 2.0 / 2.5 / 3.0 mm

MATERIAL	SPECIFICATION
galvanized steel	DX51 / DX53
aluminium	AL5005 / AL5754
copper	Cu-ETP (CW004A) / Cu-DHP (CW024A) status R240
brass	CuZn37 (EN CW508L)
stainless steel	AISI304 / AISI316L

LEAK TESTING

- Bubble Testing (Compliant with EN 1593) method conforms to EN 1593 standards, ensuring reliable leak detection.
- Helium testing in accordance with EN ISO 20485, a highly precise method capable of detecting even the smallest leaks, as low as 3g/year, of refrigerants like R22, R134a HFL refrigerants

LCE COATING

In 2012 we introduced a new technology of surface protection called LCE Coating. This technology protect heat exchanger coils from corrosion, mould and bacteria growth in a very effective way. Unlike solvent-based coatings, LCE Coating is a **water-based product** that brings us significant improvements; **Super Hydrophobic effect** and **Anti-microbial protection**.

NO MORE CORROSION

Many air handling units are working in aggressive environments such as coastal locations, food production lines, animal shelters, piggery units etc. where the standard protection isn't enough. LCE Coating offers a perfect solution for coils in such environments.

Anti-corrosion solution that actually works, LCE Coating makes a protective elastic layer on the whole surface of the coil. This layer is capable of withstanding thermal dilatation of the coil without cracking. Elasticity is a critical ability to prevent the creation of small cracks where corrosion begins. With this ability we can be sure that the protection works while the unit is working in real conditions.

LCE Coating is a highly functional anti-corrosion protection that provides a protective elastic layer on the whole surface of the coil. This layer is capable of withstanding thermal expansion of the coil without cracking.

Elasticity is a critical ability to prevent the creation of small cracks where corrosion begins. With this feature, you can be sure that the protection works even when the unit is operating under the most difficult working conditions.

LCE COATING BENEFITS:

- increases the lifetime of your units in highly aggressive environments
- anti-microbial protection prevents bacteria growing inside your units
- repairable on-site coating
- no impact on capacity
- 100 % penetration inside coil due to total immersion application.
- Super hydrophobic surface.
- Coating with strong bond to the substrate surface



Process that guarantees 100 % penetration & protection. The entire coil is immersed into a liquid form of LCE Coating letting the liquid penetrate even the smallest spaces between fins including fin collar, louvre, heat slots or any other type of forming. In addition, all other parts like U-bends, end-plates, side plates, headers, capillaries are coated and protected as well.

Tests found 100 % penetration on fin blocks with 16 fins per inch !

CERTIFICATED:

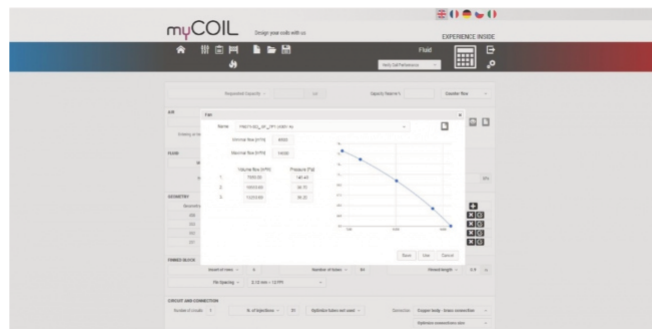
- *Passed ASTM B117 (Salt spray test) 10 000 hours in heating/cooling cycles changing temperatures between 60°C and 5°C*
- *Passed ASTM G85:A1 (Acetic Acid-Salt spray test) to prove positive impact on coils used in food industry*
- *Passed ASTM G87 (SO2 test) the same as G85, only in usage acidic SO2 electrolyte*
- *Passed ASTM D552 (Flexibility test) to demonstrate the adhesion of the surface of the protective layer to the substrate surface of the coil*
- *Passed ASTM G85:A5 (Indirect spraying of dilute salt and ammonium sulphate) at 23°C and followed by 1 hour exposure of dry air at 35°C. Test proving resistance in salt containing environment and industrial applications*
- *Passed ASTM G21 (Test for resistance to mold and fungi) important aspect for evaporators*

SELECTION SOFTWARE

The selection software **myCOIL** is a special application developed by us for **calculation of heat exchanger parameters**. The application is available in several language versions.

The software is provided free of charge.

Access for registered customers and registration form for new users: www.mycoil.eu



THE SOFTWARE WAS SET UP IN COOPERATION WITH:

- University of Padova
- University of Milan
- French Technical Center CETIAT
- JANKA ENGINEERING laboratory

THE SELECTION SOFTWARE MYCOIL INCLUDES THE FOLLOWING MODULES:

1. fluid coil
2. evaporator
3. condenser
4. heat pump
5. glycol circuit
6. determination of refrigerant features
7. determination of air features

MYCOIL MODES:

- **performance verification**

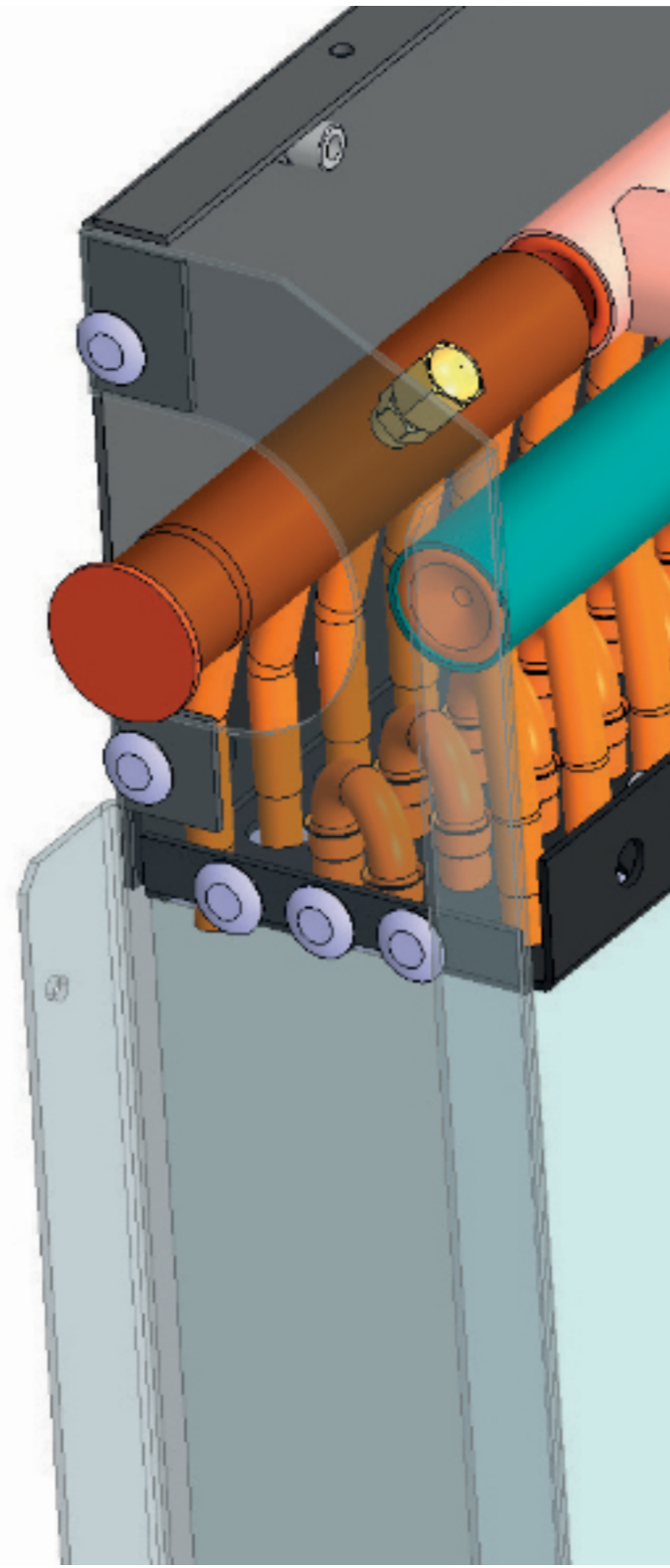
used to calculate the heat exchanger performance based on knowledge of air and medium or refrigerant parameters and heat exchanger geometry

- **finding suitable heat exchangers**

based on knowledge of air and medium or refrigerant parameters and the required heat exchanger performance or air outlet temperature

After using the customer receives a technical sheet with a list of the resulting parameters.

myCOIL



TECHNICAL DRAWINGS

Technical drawings are sent to customers for approval together with the **3D model** in STEP format prior to production.

Once we finish the 3D coil model, we prepare an **overview drawing** with the positions of the main product parts. This means the fixation points and connection points.

We prepare **production drawings** of the components after 3D design approval by customer.

- we create 3D models in **CREO (PRO/ENGINEER)**
- we have more than **20 000 current drawings** in our database
- we draw on average **1 800 drawings in recent years**
- fast response with average lead time **5 working days** since specification

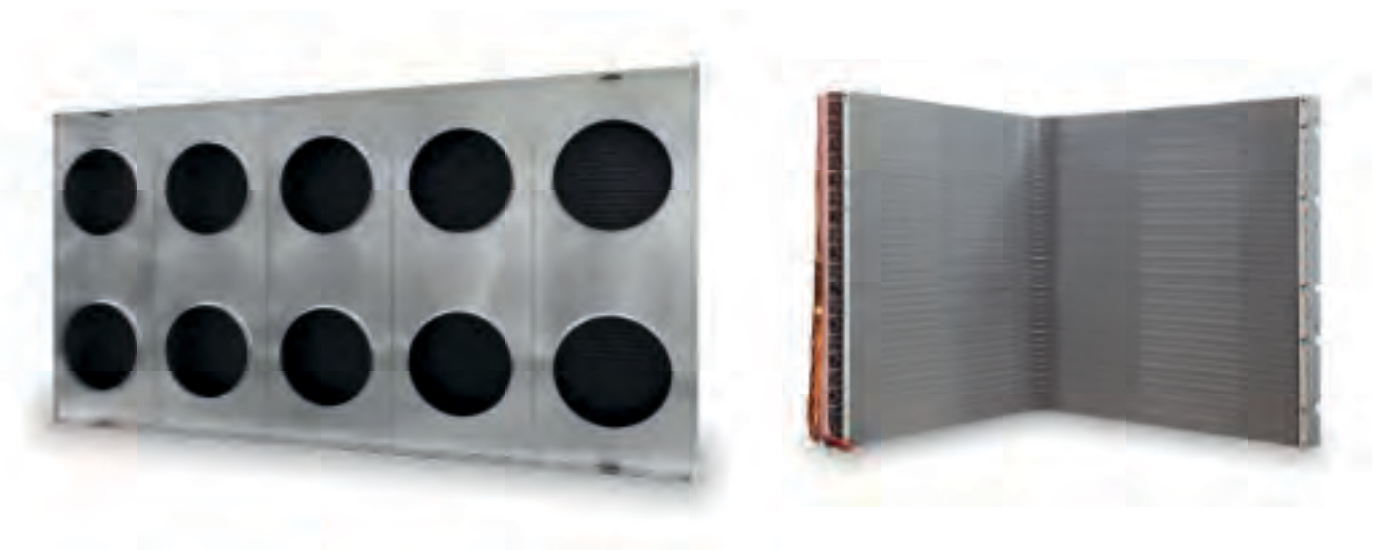
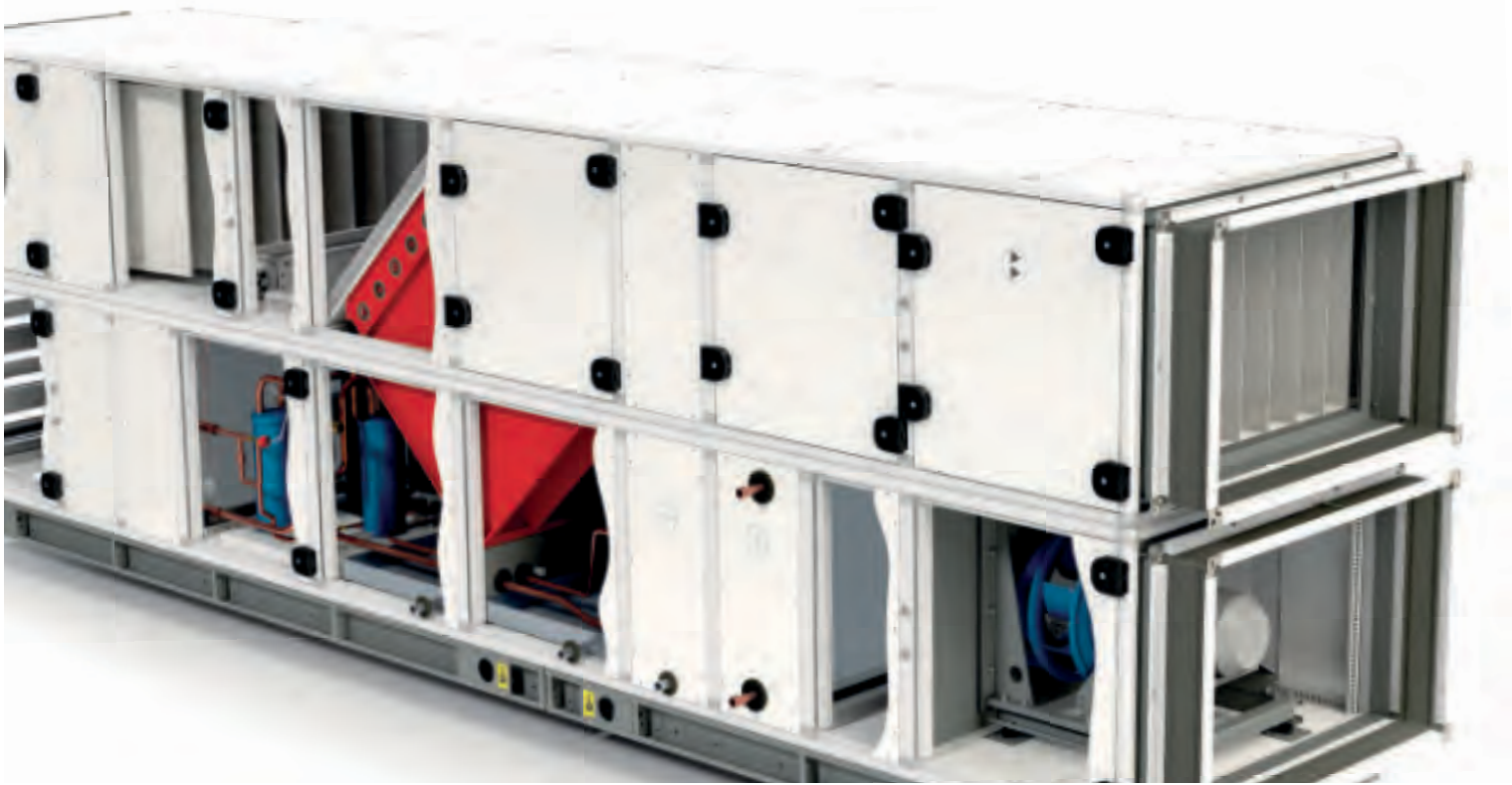
APPLICATION

- air handling units
- heat pumps
- transport AC and refrigeration
- cooling boxes and displays
- chillers and convectors
- rooftops
- condensing units
- milk tanks
- air curtains
- vending machines for packaged beverages
- free cooling (glycol circuits)
- other applications



OFFERED SOLUTION

- casing with integrated fan collar for axial fans from \varnothing 260 up to 630 mm
- circuiting for horizontal, vertical or combined use
- straight or bent coils
- usage with high pressure refrigerants R-32 and R410A (tested up to 50 bar)
- some patterns may be produced with defrosting slots/grooves
- powder coat painting in 17 standard colours or according to choice
- the ability to deliver LCE Coating offering anti-corrosion and anti-microbial protection
- possibility to offer evaporators with double fin spacing



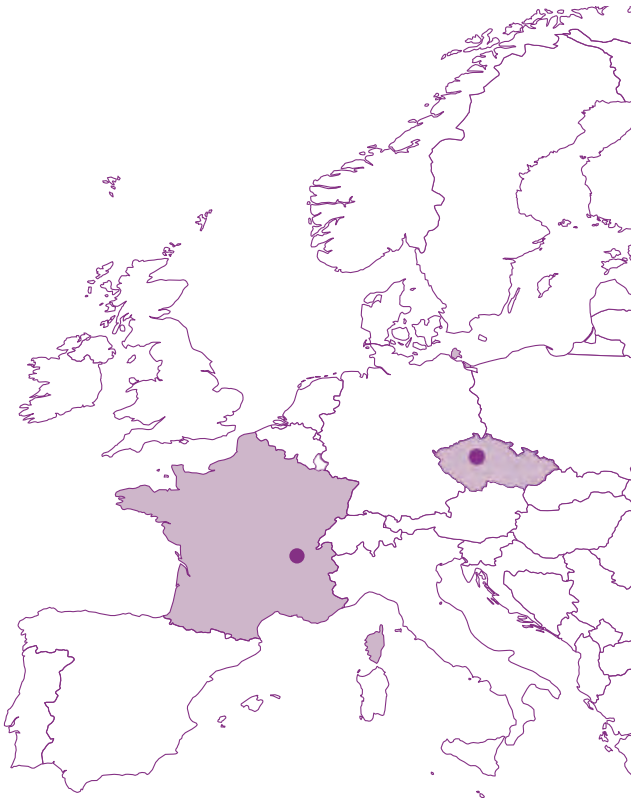
SALES MANAGERS

Our sales managers are available to discuss your inquiry, suggest the best possible solutions, arrange delivery dates, provide prices, payment and contract terms. They will be available to you during your order and for any additional requirements or questions.

You can rely on them.

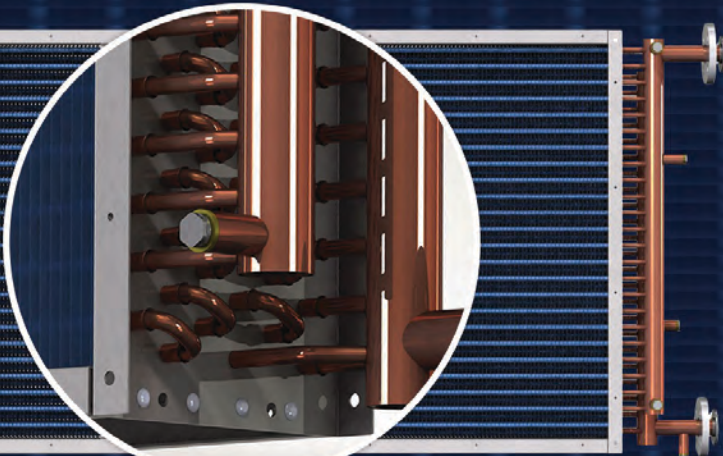
Sales managers are located in **Prague** (Czech Republic) and **Lyon** (France).

Each of them is responsible for a different sales area in order to be close to our customers.



SALES SUPPORT TEAM

Our sales support colleagues are responsible for the day-to-day **communication with the customer** and the **order administration**. Once you want to place an order, ask about the current order status, change the delivery date or have any question, they will be happy to help you.



Our sales support team is based in Prague, they speak multiple languages and are available at any time.

CONTACTS

HEADQUARTERS - CZECH REPUBLIC

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E-MAIL info@4coilstech.eu

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