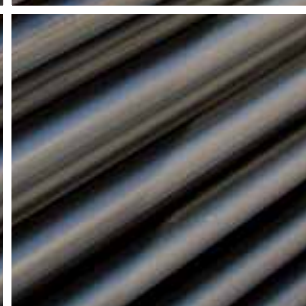
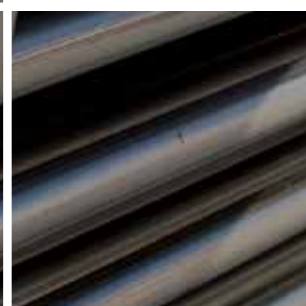
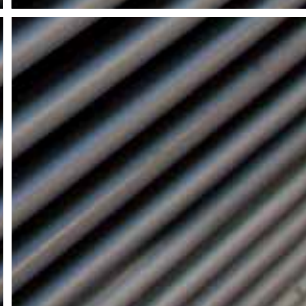


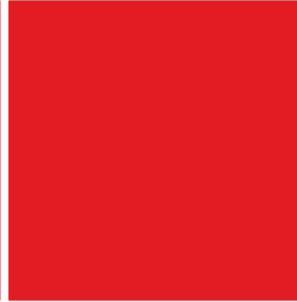
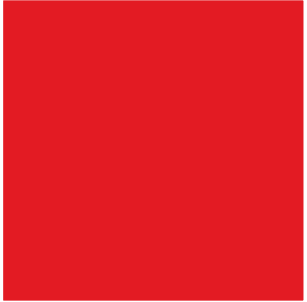
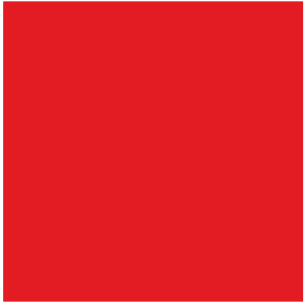
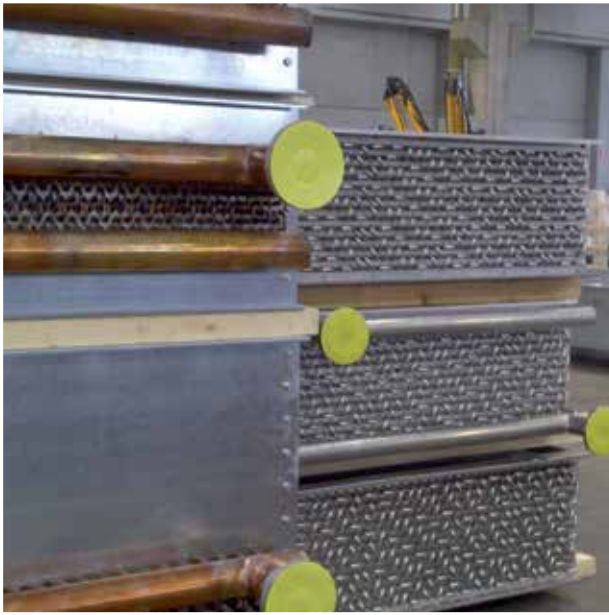
**HEAT EXCHANGERS
FOR HVAC, MARINE
AND SPECIAL
APPLICATIONS**



**COMPANY
PROFILE**







CONTENTS

| | |
|---------------------------------|----|
| <u>INTRO</u> | 4 |
| <u>PRODUCTS</u> | 6 |
| <u>ACCESSORIES AND SERVICES</u> | 8 |
| <u>APPLICATIONS</u> | 10 |
| <u>WHY CHOOSE US?</u> | 14 |
| <u>SOFTWARE</u> | 16 |
| <u>QUALITY</u> | 18 |
| <u>TECHNOLOGY</u> | 20 |
| <u>SALES NETWORK</u> | 22 |
| <u>CONTACTS</u> | 23 |

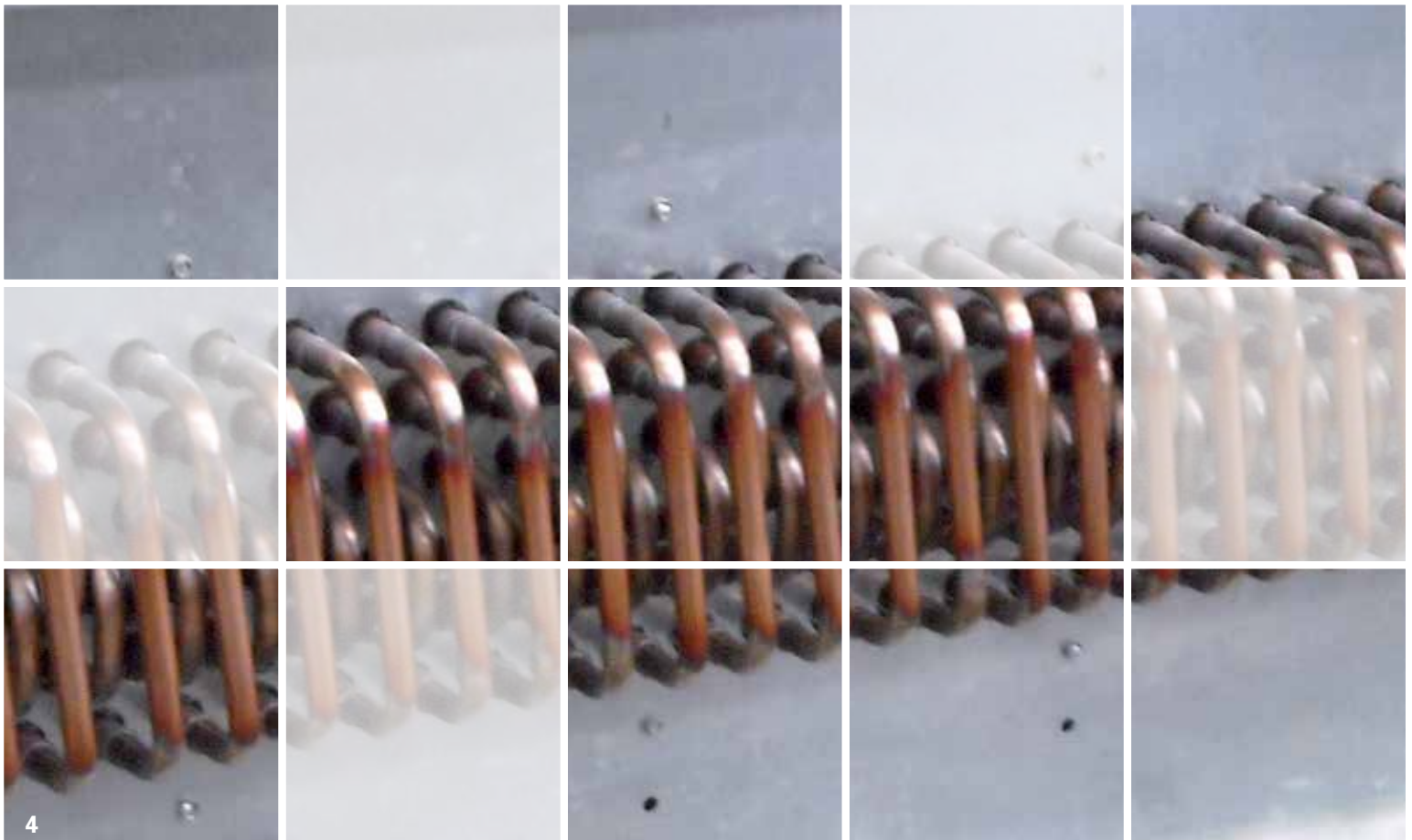
DBM S.P.A. HAS OVER 30 YEARS OF EXPERIENCE IN THE DESIGN, MANUFACTURE AND DEVELOPMENT OF FIN / TUBE HEAT EXCHANGERS.

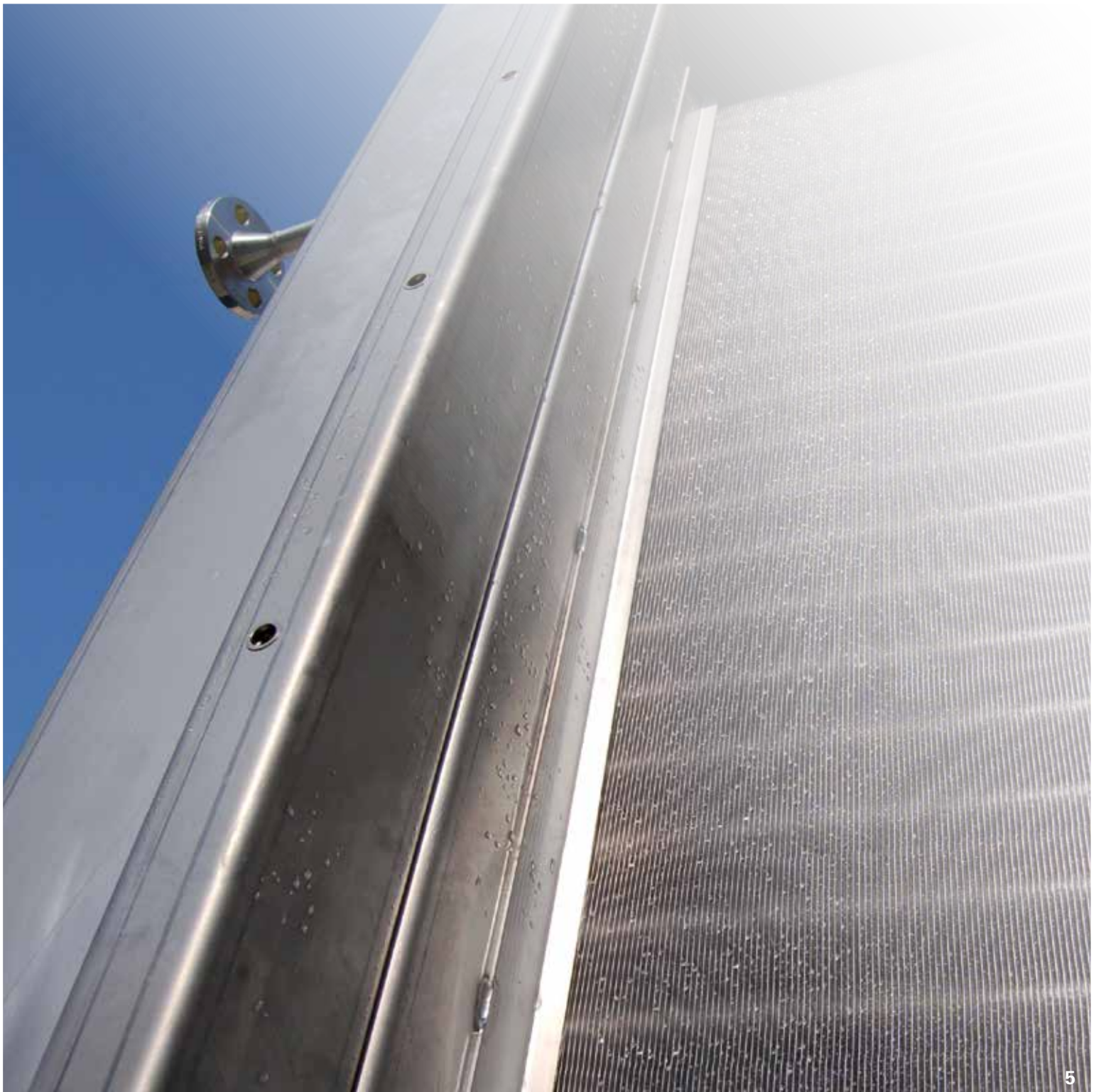
We are a strong, dynamic and competitive company. Our heat exchangers are installed on sites and in applications Worldwide. This ranges from small HVAC systems to the larger, more complex applications such as Gas Turbine Air Intake Cooling Systems, Offshore and specialised Industrial Processes.

We export over 70% of our production to various locations which include Australia, United States, the Middle East, North Africa, and all European markets.

We have two state of the art manufacturing facilities, totalling more than 18000m2 of covered surface. Together these consist of eight, highly efficient production lines utilising the most up to date manufacturing machinery available to our industry. Our Research and Development Department is constantly developing our products, machinery and processes to keep up with the increasing demands and requirements of the market.

Our year on year turnover has steadily increased. This leaves us safe in the knowledge that our experience, competitiveness, quality and emphasis on growth and development is satisfying our existing and returning customers as well as attracting new ones from various industries.





WE DESIGN, MANUFACTURE AND SUPPLY:

- **Continuous fin type heat exchangers:**

Available in a wide range of materials, geometries and dimensions. This range of products includes water heating and cooling coils, evaporators, refrigerant condensers, diathermic oil heating coils and steam condensers.

- **Spiral tubes coils:**

Specifically for industrial use. Manufactured in steel, stainless steel and titanium tubes. Fins are available in a variety of materials and thicknesses.

- **Cleanable heat exchangers:**

Manufactured with removable headers to facilitate the internal cleaning of tubes. These are supplied with either finned-block or spiral tubes.

- **'Run Around' Heat exchangers:**

Heat / Energy recovery systems with finned-block coils, spiral and bare tubes.

- **Bare tube heat exchangers:**

For high temperatures (over 300°C) or for applications in which airborne particles like fibres, oil or dust may obstruct the coil face area.

Specifically manufactured for hospital, clean room or pharmaceutical applications. Available in different diameters, thicknesses and materials.

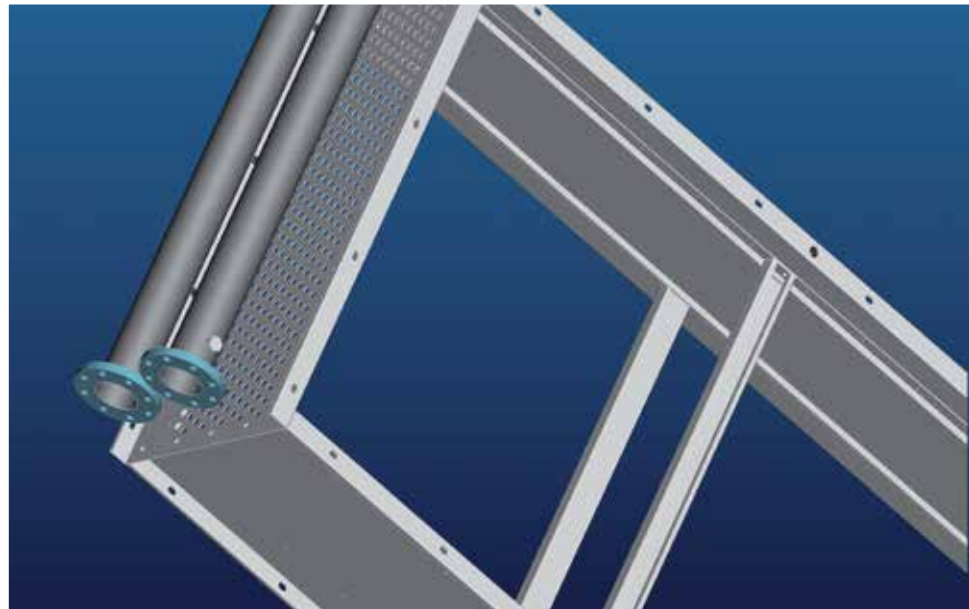
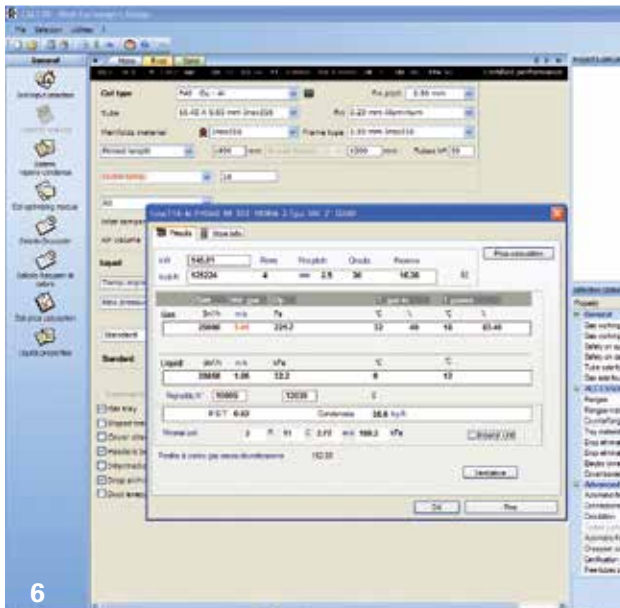
- **Heat pipes:**

For energy recovery systems.

Vertical or sloped configuration with optional tilt. Supplied with or without refrigerant charge.

- **Energy recovery wheels:**

For air to air energy recovery in ventilation systems and air handling units. Rotor in aluminium or hygroscopic aluminium for latent heat recovery. Available with constant or variable speed drive systems.



Our coils are made to your exact specifications. Each product is unique. It is designed, created and optimised to meet your needs. Every solution we offer is always the best one, both from the technical and the economic point of view.



ACCESSORIES

We offer a wide range of accessories, including:

- Plastic or stainless steel moisture eliminators (integrated, removable or slide out)
- Flat or sloped, fixed or removable drain trays
- Fixed or removable protection guards
- Flanges
- Defrosting systems through electric resistors, hot water or hot gas injection
- Anticorrosive treatments and coatings (Heresite P413, Blygold, cataphoresis paint system, Electro-tinning)
- Spray or powder painting for the casing or the whole coil
- Special or customised frame executions

SERVICES

In addition to the supply and manufacture of coils, we also supply the below services to all of our clients:

- On-site inspections and surveys that allow us to inspect damaged coils
- Supply of spare parts for air conditioning or ventilation systems
- Installation service





APPLICATIONS



AIR HANDLING UNITS:

We manufacture hot water, steam, chilled water, direct expansion and condenser coils for heating, cooling and heat recovery systems.

VENTILATION SYSTEMS:

We offer duct mounted coils, which include airtight casing, drain tray and moisture eliminators as additional accessories.

HEAT PUMPS:

We offer coils for refrigerant heat pump systems with reverse cycle performance. During Summer / Winter months, the same coil works as an evaporator (Cooling) or a condenser (Heating).

MARINE AND OFFSHORE APPLICATIONS:

We specialise in design and manufacture of heat exchangers for the Marine and Offshore Industry. These include applications such as cruise liner air conditioning, engine room cooling, remote condensers and air handling units for offshore platforms.





TEXTILE PLANTS:

We manufacture heat exchangers with reinforced fins and wide fin pitch or bare tubes which can work with dirty air containing fibres or manufacturing residuals.

REFRIGERATION:

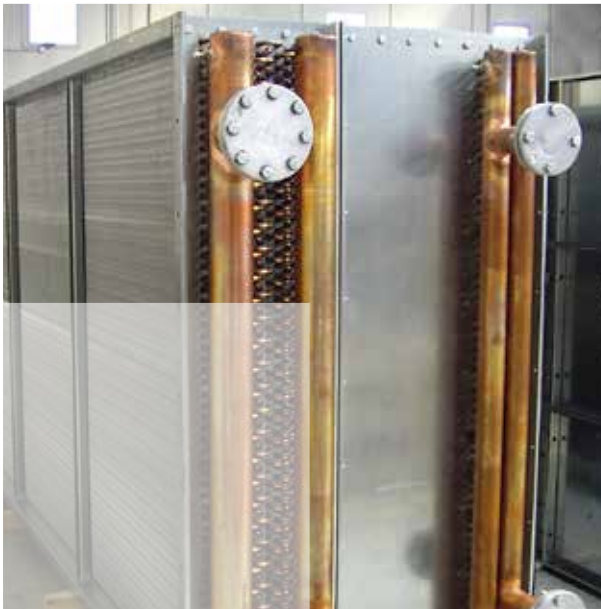
We offer glycol / water, brine or direct expansion heat exchangers with wide fin pitch. If required, we can supply hot gas, water or electric resistors defrosting systems. Special drain trays, fixed or removable, which can facilitate cleaning, are also available.

PAPER INDUSTRY:

We offer heat exchangers for the heating of process air. These can work with steam, condensate, thermal oil or hot water. Finned-block, finned-tubes or bare tubes execution are available.

DRYERS (CELLULOSE, PELLET, FOOD, ETC):

We produce heat exchangers that can continuously work with high temperatures thanks to our exclusive "floating fin block" execution. This design prevents any contact points between the tubes and the casing. According to the air composition and the working temperatures, we are able to offer the most efficient coil design together with the most suitable materials for the given application.



APPLICATIONS



DRY AIR LIQUID COOLERS AND AIR COOLED CONDENSERS:

We manufacture heat exchangers up to 12800mm length, which we supply to a number of major Dry Air Liquid Coolers and Air Cooled Condensers manufacturers worldwide. These are specifically designed together with our customers for installation on flat bed, vertical, and Vee configurations. We also offer fan plates, plenums and legs which reduce assembly/manufacturing times for our customers.

ENERGY RECOVERY FOR AIR CONDITIONING SYSTEMS:

We offer energy recovery system coils, which are calculated within our software. The system can be made of a single heat recovery coil, or it can include several coils in supply or exhaust air steam.

ENERGY RECOVERY FROM FUMES:

We manufacture airtight execution heat exchangers, completely welded, which can generate hot or heated water using high temperature fumes originating from industrial boilers, engines or industrial processes.

COOLING OR ANTI-FROST COILS FOR GAS TURBINE AIR INTAKE SYSTEMS AND ENGINES:

We produce cooling coils for turbines inlet combustive air, manufactured with a special execution that can exclude the presence of moving parts that can potentially get detached in the airflow. We also offer engine inlet air pre-heating coils. These are often supplied with materials that are suitable for the harsh environment of the location, including reinforced fins and tubes, stainless steel casing, Heresite P413 coating or AIMag fin construction.





FROST HEATING COILS FOR FILTERS PROTECTION:

We produce coils working with hot water that can prevent particularly delicate and expensive filters from freezing.

HEAT EXCHANGERS FOR CLEAN ROOMS APPLICATIONS

We offer various designs for installation in ducts, Fan Filter Units (FFU) or air handling units. Coils are supplied in several different materials, often together with stainless steel frames or powder painting.

OIL COOLING:

We produce coils used for the cooling of machine lubricant oil, which are available with turbulators inside the tubes.

INDUSTRIAL PROCESSES:

These coils are used in the plastic industry, surface treatment machinery, painting booths, ovens, and many more.

We are able to choose the best materials and thermodynamic sizing for the coils needed in many different industrial processes.



WHY CHOOSE US?

FLEXIBILITY IS OUR STRENGTH:

We can easily adapt to your standard. We design according to your requirements, no matter how complex. We deliver when you want it, on time.

RELIABILITY:

Our customers can rely upon the answers our technical office gives them. In an industrial sector where the technical content is so elevated, is extremely important to develop a strong trust-based relationship with the customer.

EXPERIENCE IS ESSENTIAL WITHIN OUR MARKET:

Established over 30 years ago, D.B.M Coils S.p.a. has amassed knowledge in all sectors of the heat exchanger industry, from HVAC to Process to Offshore applications and many more.

HELPFULNESS:

We are always there to answer to all of your questions and to listen to your requests. We are everywhere you need us to be.



EXPERTISE OF OUR STAFF:

From our Sales Agents to our Applications Engineers to our Technical Department, we are always available to advise and help our customers to come up with the most suitable and cost effective solution to their requirements.

RELIABILITY IN OUR PRODUCT AND SERVICE:

With 2 large manufacturing facilities, 170 employees and 30 years of history, we are perfectly positioned to fulfill our clients' requirements. We export 70% of our production. We service the market leaders for the most critical applications.

INVESTMENT IN THE FUTURE:

Our production facilities accommodate state of the art machinery and highly qualified personnel. Our stand alone, coil selection software has been developed over many years and is continually being improved.

We have worked closely with various heat transfer institutions and universities to develop our range products.



IN ORDER TO BE EXCELLENT, A COILS SELECTION SOFTWARE NEEDS TO BE RELIABLE, FLEXIBLE, CONCISE AND EASY TO USE.

Our comprehensive software allows us to work efficiently, which in turn minimises the possibility of errors.

Our software was first developed in 1998. Since then, we have continuously developed and improved it right up to the current version. Our software is not simply a commercial tool suitable for our needs, but an original project constantly evolving.

We have worked closely with various institutions both in Europe and in the United States when designing our software. This has included many hours of programming and comprehensive laboratory tests of our components. We have also worked on several projects in collaboration with Universities specialising in heat transfer.

Every heat exchanger that we manufacture is bespoke. For this reason our software helps us design and manufacture the right heat exchanger for the application required.

Up to date, this is one of the most advanced software on the market. It is available both in stand-alone version and also DDL format allowing it to be used within our customers' software.





QUALITY

Ensuring product quality is the cornerstone of everything we do, we believe that this quality comes hand in hand with the internal procedures which we have in place.

We are continuously investing in product certification, manufacturing techniques and in our quality system. Our company policy, which focuses on quality, aims at the optimisation of our internal procedures, allowing us to manage many different types of project. This allows us to guarantee the quality of all of our products, with the maximum attention to every detail. In order to reach our goals we daily produce project specific Quality and Test Plans, offer materials traceability and quality certificates and carry out continuous visual and dimensional checks.

PRODUCT CERTIFICATION*

AHRI 410 "FORCED CIRCULATION AIR COOLING AND AIR HEATING COILS"

This is an American certification on continuous fin type heat exchanger performance with forced air circulation. The operating conditions, including both the fluid and airside pressure drop, are certified by an independent research organisation which, every year, carries out laboratory tests which verify that what is published on the technical catalogues and selections software is true and reliable.

EUROVENT "HEATING AND COOLING COIL" PROGRAM

This is a European certification on continuous fin type heat exchangers performance.

An independent research organization certifies that what the coil manufacturer claims is in accordance with the tolerance established by the program.

TECHNICAL CERTIFICATION*

PED 97/23 CE

We are authorized to design and build CE marked pressure vessels and piping, in Class I and II. We can also manage projects in superior class, through the G evaluation form. Our brazing processes are qualified according to the EN 13134 normative. Our operators are qualified according to the EN13133 normative. Our welding processes for iron, copper nickel and stainless steel are qualified according to the EN 288, EN 15614-6, EN 15613 normative or according to the ASME Code Section IX. Our welders are qualified according to the EN 287-1, EN 9606-3, and EN 287-1 normative or according to the ASME Code Section IX.

QUALITY SYSTEM CERTIFICATION*

Our Quality System is certified according to the UNI EN ISO 9001:2008 normative. It aims to a continuous improvement of our company performance.



RINA



*The certifications herewith listed might not be available for both companies or for each product on the catalogue. For further information please contact our sales department.

CERTIFICATO
secondo EN 13133

Pascal
Pagina 1 di 11

Certificato di prova n° **PARA 017-2003**

Manufacturer's name and address: **D.B.M.S.r.l.**
Via Ugo La Motta, 10
Varese (VA) (IN)

Examining body: **Pascal/et. Masini**
Data assistenza al segg: **12-11-2002**

Manufacturer's brazing procedure reference No.: **BRA 004/01; BRA 004/01; BRA 005/01**

Broser Name: **Michele Giulio**

Details of approved brazing procedure:
Cannello (hand torch)
Microdevia No. 8
C₂H₂O₂ + Propano/O₂ =
0,64 bar = US bar
Di teste a 4 bochie (start and lap joints)

Joint design:
Spec. Tubo Cu (EN 12750-2): **0,75 mm x 15,0 mm**
Spec. Tubo Cu (EN 12750-1): **1,00 mm x 60 mm**
Spec. Tubo ottone: **4,00 mm x 80 mm**

Notes: * Dimensional sketches or drawing reference, including position of joint, are valid in all cases. ** Heating temperature and pressure of gas at heating temperature and protection as access.

CERTIFICATO
secondo EN 13134

Pascal
Pagina 1 di 11

Certificato di prova n° **PLRP 004-2003**

Manufacturer's name and address: **D.B.M.S.r.l.**
Via Ugo La Motta, 10
Varese (VA) (IN)

Examining body: **Pascal/et. Masini**
Data assistenza al segg: **12-11-2002**

Manufacturer's brazing procedure reference No.: **BRA 004/01**

Broser Name: **Ribbini Pasquale**

Details of approved brazing procedure:
Cannello (hand torch)
a bochie (lap joints)
velerie schizzo

Joint design:
Spec. tubo Cu: **0,75 mm**

AHRI CERTIFIED
www.ahriindustry.org

Certificate of Product Ratings

AHRI Certified Reference Number: **320943** Date: **2/1/2012**

Product: **Forced Circulation Air-Cooling and Air-Heating Coils**

Coil Type or Line Designation: **P3012**

Manufacturer: **D.B.M. S.R.L.**

Trade/Brand name: **DBM SRL**

Rated as follows in accordance with AHRI Standard 350: **Coils and sub-coils**

† Status: **Active**

EUROVENT CERTIFICATION COMPANY SCRL
62 Bd de Sébastopol 75003 Paris FRANCE - RCS Paris B 393 363 460 - Code APE : 748K

Certification Diploma N° : **10.02.468**

EUROVENT Certification Company certifies that
Cooling & Heating Coils

from
GEO.COIL S.R.L.

Located at
Via Buia 6, 33011 Artena (UD), Italy

Range
P3012

Software for calculation of performances
Calc. V.3.2 (03-01-2011)

Trade name
GEOCOIL

have been assessed according the requirements of following standard
OM-9-2002

The list of certified products is displayed at :
<http://www.eurovent-certification.com>

GEO.COIL S.R.L.
is authorised to use the EUROVENT Certification mark in accordance with the rules specified in the Operational Manual
OM-9-2002

Erick MELQUIOND
Managing Director

Approval date : **2010/02/24**
Re-checked on : **2011/10/25**
Valid until : **2012/12/31**

RINA

QW-483 PROCEDURE QUALIFICATION
Certificate No. **002/01**

COMPANY NAME: **D.B.M. S.P.A. VARALLO POMBE**
PROCEDURE QUALIFICATION RECORD No. **002/01**

WPS No. **002/01** CuNi
WELDING PROCESS (ES) **GTAW with filler metal**
TYPE (S) **MANUAL**

JOINTS (QW - 402)
Single pass: **87 A; 11 V; 8 cr/min**

BASE METAL (QW - 403)
Material spec. **ASTM B111**
Type or Grade **C70606** to P No **34** Gr

FILLER METALS (QW - 404)
Weld metal Analysis A No. **N.A.**
Size of Electrode **2.0**
Filler metal F No. **34**
SFA specification **5.7**
AWS Classification **ERCuNi** Solid rod
Filler metal product form
Deposited weld metal thickness mm **2**
Trade name(s) **CUPRONICHEL 70/30**

POSITION (QW - 405)
Position of groove **1G rotated**
Weld progression **N.A.**
Other -

PREHEAT (QW - 406)
Preheat Temp. Min. **15 °C**
Temp. Max. **N.A.**

Certificate No. **10M00994P03/A**

JOINT DETAILS AND WELDING SEQUENCES

FILLET JOINT WELD ON PIPE, WITHOUT FILLER METAL, SINGLE PASS

| Pass No. | Process | Filler metal diam. (mm) | Filler metal classification |
|----------|---------|-------------------------|-----------------------------|
| 1 | 141 | N.A. | N.A. |

PARENT MATERIAL

| Material specification | 1): | ASTM A312 |
|---|-----|-----------|
| Type or grade | 1): | TP 304 |
| Group(s)/Subgroup(s) No. (ISO/TR 15608) | 1): | 8.1 |
| Thickness (mm) | 1): | 1; 2=1 |
| Diameter (mm) | 1): | 16 |
| Branch connection angle | 1): | N.A. |
| Other | 1): | |

WELDING CONSUMABLES

| Process | 141 |
|------------------------------|------|
| Trade name(s) | N.A. |
| Specification | N.A. |
| Classification / designation | N.A. |
| Size (mm) | N.A. |
| Deposited metal thickness | N.A. |
| Groove | - |
| Throat | - |
| Flux trade name | - |
| Consumable insert | - |
| Other | - |

TECHNIQUE (QW - 410)
Travel speed
String or Weave Bead
Oscillation
Multipass or Single pass
Single or Multiple Electrodes
Back gouging

TECHNOLOGY

To meet our customers' demands with regards to quality and service, state of the art production machinery is not enough on its own. In addition we have developed and implemented aided design and ERP software.

DESIGN

Our technical office utilises 3D CAD software application which has been developed within the company. Each component and sub-component is modelled and evaluated by our expert design team. This facility allows us to eradicate, at the design stage, any possibility of production problems when issued to the factory.

Extracted from the 3D model is all of the information necessary to program our CNC machinery. These include the fin press, tube forming and header drilling machinery, all of which are of paramount when planning the heat exchanger production process. Every requirement and all technical information regarding each and every project is stored internally in our system. This allows all information that is attained to be readily available to all of our employees, from design and production through to quality control and final inspection of goods.



MANUFACTURING CONTROL

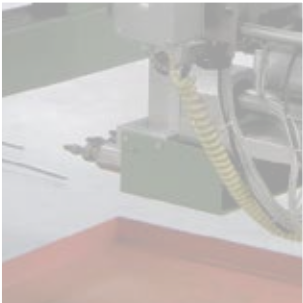
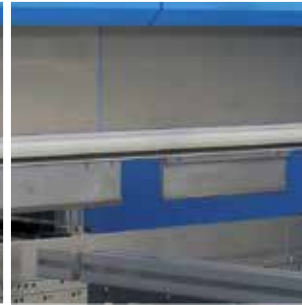
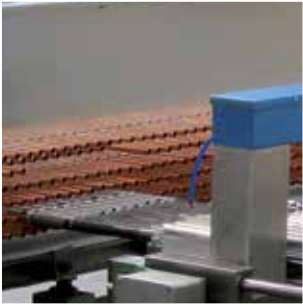
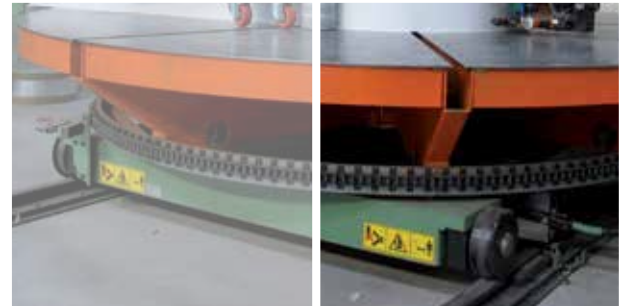
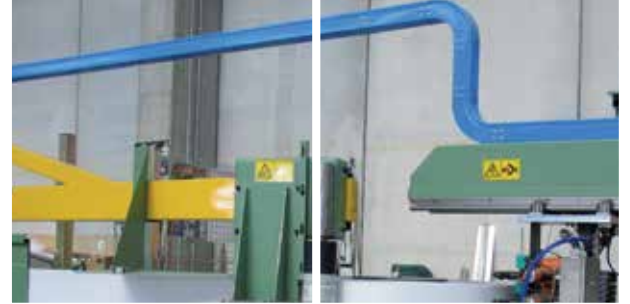
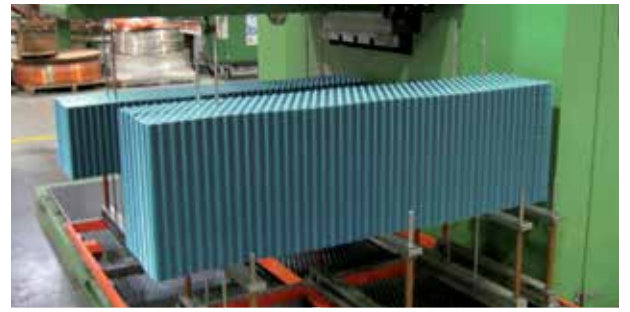
Thanks to the ERP software, we are able to daily monitor our production progress instantaneously. Furthermore, we can evaluate our workload day by day, thus predicting possible critical situations. This process allows us to act accordingly, eradicating any delays, thus resulting in the satisfaction of our customers.

We are also able to offer precise and prompt information about manufacturing progress and delivery status.

MANUFACTURING TECHNOLOGIES

We utilise only the most technologically advanced machinery, provided by the best suppliers on the market. This allows us to guarantee our customers high quality products.

Presently, we have eight extremely efficient production lines, each highly automated, which allow us to reach maximum operational flexibility and in turn results in short delivery lead-times, if compared with the market average, especially during peak season.



SALES NETWORK

UK & IE

DBM UK SALES OFFICE

Mr. Andrew Fordy
Unit 10 Easter Park Baker Road
Nelson Park West - NE23 1WQ Cramlington
Tel: +44 (0) 1670 739964
Mob: +44 (0) 7813 352622
E-mail: afordy@dbmcoils.com

FRANCE

TRIANON INVEST SARL

26 D rue Henri Simon
78000 Versailles
Tel: +33 (0) 1 30839234
Fax: +33 (0) 1 30839239
E-mail: laurent.garma@trianon-echangeur.com
Website: www.trianon-echangeur.com

HOLLAND

ICARUS CHILLING B.V.

P.O.Box 23501
3001 KM Rotterdam
Tel: +31 181 414101
Fax: +31 181 414053
E-mail: info@icaruschilling.com
Website: www.icaruschilling.com

ITALY - LAZIO

CARBOTTI ANDREA

Via dell'Assunzione 59/D
00168 Roma
Tel: +39 06 64467232
Fax: +39 06 233219315
E-mail: carbotti@yahoo.it



NORWAY

VENTCO A/S

Jernbanegaten 13, Postboks 129

1851 Mysen

Tel: +47 69 895611

Fax: +47 69 891690

E-mail: ventco@ventco.no

Website: www.ventco.no

GERMANY

INDUSTRIEVERTRETUNG

RAINER PERLEBERG

Wiesenhof 30

D – 22143 Hamburg

Tel: +49 (0) 40 23935988

Fax: +49 (0) 40 23935989

E-mail: rainer.perleberg@t-online.de

Website: www.iv-rp.de

CONTACTS

DBM S.p.A. a socio unico

**Sales and technical offices,
production**

Via Ugo la Malfa 10

28040 Varallo Pombia (NO) – Italy

Tel: +39 0321 956794

Fax: +39 0321 957266

E-mail: sales@dbmcoils.com

Website: www.dbmcoils.com

Geo.Coil S.r.l. a socio unico

Production

Via Buja 6

33011 Arterga (UD) – Italy

Tel: +39 0432 977135

Fax: +39 0432 977528



Sales and technical offices, production

DBM S.p.A. a socio unico
Via Ugo la Malfa 10
28040 Varallo Pombia (NO) – Italy
Tel: +39 0321 956794
Fax: +39 0321 957266

Production

Geo.Coil S.r.l. a socio unico
Via Buja 6
33011 Arterga (UD) – Italy
Tel: +39 0432 977135
Fax: +39 0432 977528

E-mail: sales@dbmcoils.com
Website: www.dbmcoils.com