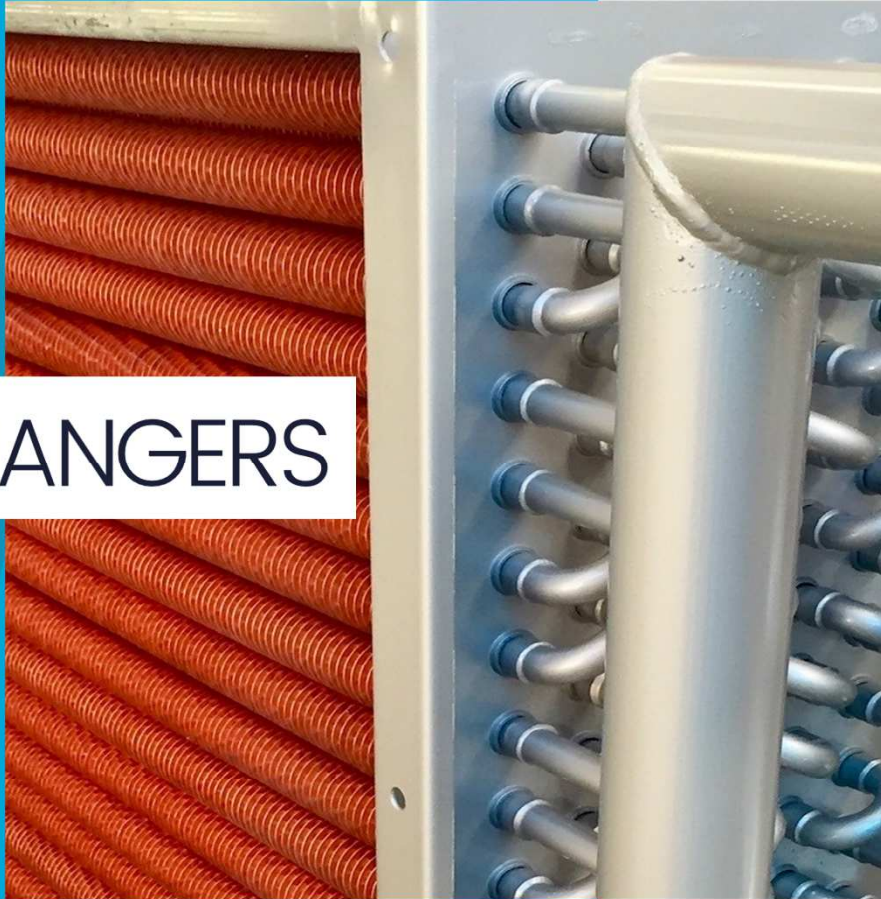




3S HEAT EXCHANGERS



COMPANY PROFILE

3S S.r.l. was established in 1973.

Since from its origin the Company was oriented to the design and production of equipment components which are widely used in all thermal heat exchange industrial applications, through the construction and supply of heat exchangers tested in accordance with the different international standard regulations.

3S Srl has more than fifty years of experience on the market. Our experience is characterized by a continuous technical improvement in terms of design and equipment construction, supported by appropriated business decisions, that have allowed us to follow the development of the European and international markets through the use of innovative technologies for the production of all our components.

Our company has several production units for a total area of 12000 sqm where more than over 60 persons work.

The finned block heat exchangers are designed and built in Trezzano Rosa.

In this site are also located our Administrative and Executive offices including the Technical department.

Another unit is based in Cambiago where a warehouse for raw materials storage is located and where the Production Department performs the assembling and manufacturing of heat exchangers with spiral fins tubes or smooth pipes and other special constructions.



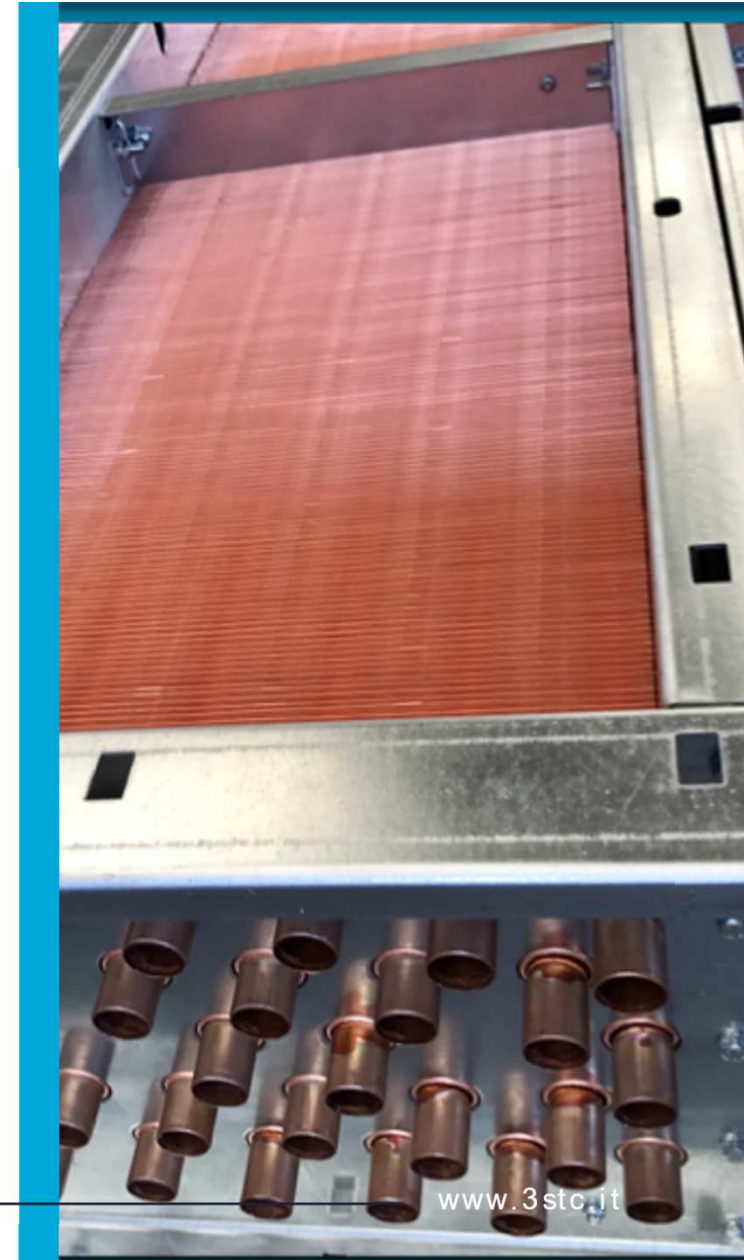
APPLICATIONS

- HVAC
- Heat pumps
- Marine-and-Offshore
- Textile-plants
- Paper industry
- Refrigeration
- Liquid coolers and Condensers
- Energy recovery system
- Heat recovery from hexhaust gases
- Gas turbine air intake coils
- Fiilter protection
- Oil cooler
- Clean room
- Industrial proceases
- Special applications



FIN BLOCK COILS (Materials)

- Copper/Aluminium
- Copper/Copper
- Copper/Pre-painted Aluminium
- Copper/Al-Mg2,5
- Cupronickel/Copper
- Tinned Copper / Tinned Copper
- Copper/ Tinned Copper
- Aisi304L/Aisi304L
- Aisi304L/Aluminium
- Aisi304L/Pre-painted Aluminium
- Aisi304L/Copper
- Aisi316L/Aisi316L
- Aisi316L/Aluminium
- Aisi304L/Pre-painted Aluminium
- Aisi316L/Copper
- Titanium/Copper
- Titanium/Aisi316L
- Fe/Al
- Fe/Fe



SPIRAL FINS COILS (Materials)

- Copper/Aluminium
- Copper/Copper
- Cupronickel/Copper
- Copper/ Copper Sn
- Aisi304L/Aisi304L
- Aisi304L/Aluminium
- Aisi304L/Copper
- Aisi316L/Aisi316L
- Aisi316L/Aluminium
- Aisi316L/Copper
- Aisi316 Ti
- Saf
- Sanicro
- Titanium/Copper
- Titanium/Aisi316L
- Fe/Al
- Fe/Fe
- Pre-galvanized Fe
- Fe/Fe hot dip galvanized



BARE TUBE COILS (Materials)

- Copper
- Cupronickel
- Stainless Steel 304L
- Stainless Steel 316L
- Titanium
- Carbon Steel
- Carbon Steel hot dip galvanized



COILS SELECTION SOFTWARE

3S Saldature Speciali Segrate S.r.l.
Via Bari, 8 - Trezzano Rosa (MI) Italy
tel. (+39)02 9098 1369 - (+39)02 9506 7167
fax (+39)02 9098 1374 - (+39)02 9506 7398
e-mail: info@3stc.it - www.3stc.it

OFFER n. 2685/2018 Rev. 0
Date: 24/07/2018

Selection 23270 [MF5 OS 47x 600M (05.18v)]
Customer : ABC INDUSTRY
Ref. : Mr. Thomson

FIN SIDE

Quantity		Fluid: AIR	
Specific gravity	m3/s	11.11	kg/s
Inlet	Dry bulb temp. °C	30.0	Relative humid. %
	Wet bulb temp. °C	22.0	Enthalpy kJ/kg
	Absolute humid. g/kg	13.29	
Outlet	Dry bulb temp. °C	16.0	Relative humid. %
	Wet bulb temp. °C	15.3	Enthalpy kJ/kg
	Absolute humid. g/kg	10.6	
Face velocity	m/sec	1.97	Pressure drop Pa
Condensed water	kg/s	0.0372	Sensible heat ratio
Capacity	kW	292.89	

TUBE SIDE

Quantity		Fluid: WATER	
Inlet temp.	°C	13.99	Outlet temp. °C
Velocity	m/s	1.54	Pressure drop kPa

COIL TYPE P40-16 AR 4R - 47T - 3000A - 2.5Pa Cu/Al

COIL CHARACTERISTIC

Surface		I3S Re30h-A, I3S-90 -3.31-A-0	
m2	557.9	- Est. d. empty weight kg	290
Finned length mm	3000	- Fluid content dm3	135.2
		- Finned height mm	1880

PED 2014/68/EU directive - Art. 4.3
Design pressure and temperature (inside tubes) 10.0 bar / 110.0°C

MATERIALS

Exchange tube		Copper		Diameter mm 16.50		Thickness mm 0.40	
Fins	Aluminum	Thickness mm 0.12					
Headers	Copper	Frame Stainless steel A304L		Connections Flanged			
Flanges	Aisi 304 EN 1092-1 Type 13 - PN16 (ex UNI 2254)						

Sheet 1 / 1

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e-mail: info@3stc.it - www.3stc.it

OFFER n. 2255/2018 Rev. 0
Date: 03/01/2018

Selection 22634 [MF5 OS 33x 600M (05.17v)]
Customer : ABC INDUSTRY
Ref. : Mr. Thomson

FIN SIDE

Quantity		Fluid: AIR	
Specific gravity	m3/h	40000	kg/h
Inlet	Dry bulb temp. °C	48.0	Relative humid. %
	Wet bulb temp. °C	28.3	Enthalpy kJ/kg
	Absolute humid. g/kg	17.20	
Outlet	Dry bulb temp. °C	12.6	Relative humid. %
	Wet bulb temp. °C	12.6	Enthalpy kJ/kg
	Absolute humid. g/kg	9.1	
Face velocity	m/sec	2.54	Pressure drop Pa
Condensed water	kg/s	0.1119	Sensible heat ratio
Capacity	kW	777.36	

TUBE SIDE

Quantity		Fluid: WATER	
Inlet temp.	°C	14.0	Outlet temp. °C
Velocity	m/s	1.49	Pressure drop kPa

COIL TYPE P40-16 AR 11R - 42T - 2600A - 2.1Pa Cu/Al nc = 33

COIL CHARACTERISTIC

Surface		I3S Re30g (Tr0)-E0 -10.72-A-0	
m2	1402.8	- Est. d. empty weight kg	919
Finned length mm	2600	- Fluid content dm3	255.4
		- Finned height mm	1680

Heat exchanger exempt from testing in conformity to PED 2014/68/EU directive - Art. 4.3
Design pressure and temperature (inside tubes) 10.0 bar / 110.0°C

MATERIALS

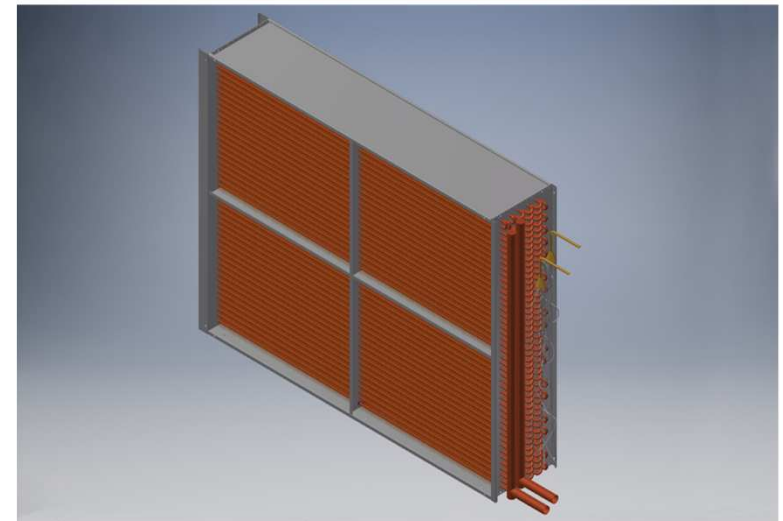
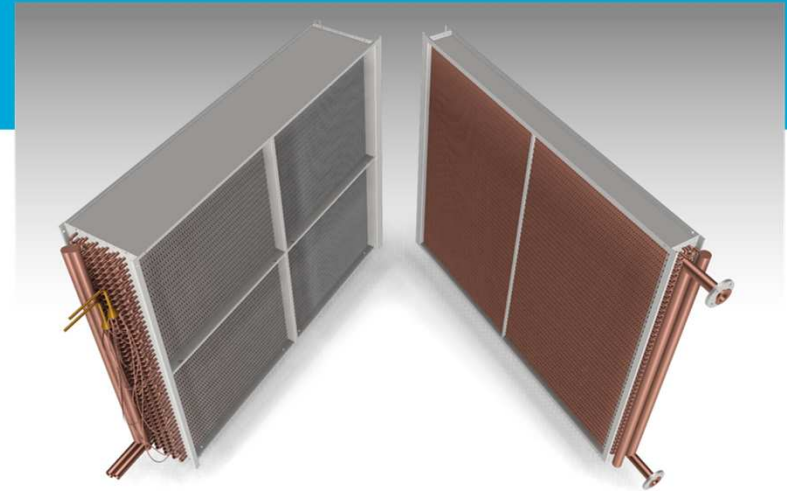
Exchange tube		Copper		Diameter mm 16.50		Thickness mm 0.50	
Fins	Aluminum	Thickness mm 0.23					
Headers	Copper	Frame Stainless steel A316L		Connections Threaded EN 10228-2			

Sheet 1 / 1

PROJECT AND CONSTRUCTION

Our Technical Department work with modern drawing technology systems CAD 2D and 3D Modeling.

These systems permit to us to obtain all the necessary information to program our CNC equipment: Finnpress, Tube bender and Headers drilling machine.



MANUFACTURING CONTROL

Using the **ERP software**, we are able to check just in time our productive process, including the workload and possible critical situations. This allows us to avoid any delays, so resulting in our customers' satisfaction.

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



TECHNICAL CERTIFICATION

PED 2014/68/UE

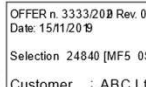
We can design and build CE marked pressure vessels and piping in every Class (from I to IV) and Module (A, A1, B+F, G).

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 ASME Code Section IX.

QUALITY SYSTEM CERTIFICATION

3S S.r.l. has obtained several years ago the ISO 9001/2000 certification in compliance with all quality standards and operative guidelines required by the international regulations.

Design and manufacture of finned-block and spiral-fins heat exchangers according to the rules VSR - ASME - TEMA - ADMK with I.S.P.E.S.L - R.I.N.A - TUV Testing

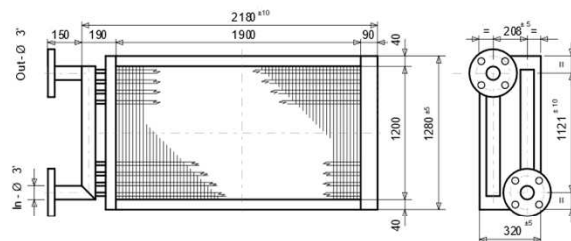


Selection 24840 [MF5 0S 52x 800C (09.19v)]

Customer : ABC Ltd
Ref. : HEAT EXCHANGER

COIL CHARACTERISTIC				13S Re30 (Tr0)-T0 -6,29-A0			
Surface	m2	3324	- Est'd empty weight	kg	357	- Fluid content	dm3 830
Finned length	mm	1900	- Finned height	mm	1200		

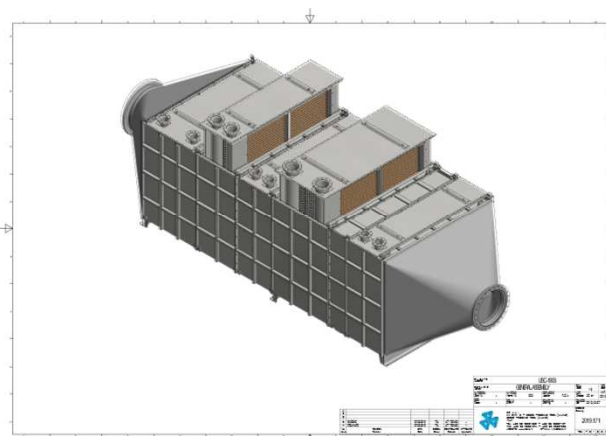
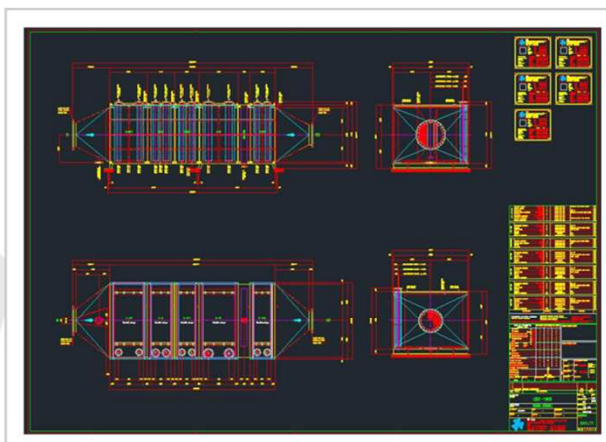
PED 2014 /68/EU directive - Art. 4.3
Design pressure and temperature (inside tubes) 10.0 bar / 110.0°C



MATERIALS					
Exchange tube	Stainless steel A304L	- Diameter	mm 16.50	- Thickness	mm 1.00
Fins	Aluminum	- Thickness	mm 0.23		
Heads	Stainless steel A304L	- Frame	Stainless steel A304L	- Connections	Flange d
Flanges	Aisi304 EN 10921 Type 11 - PN16 (ex UN 282 - ex DIN 2633)				



Sheet 1 / 1



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PRODUCT EXAMPLE

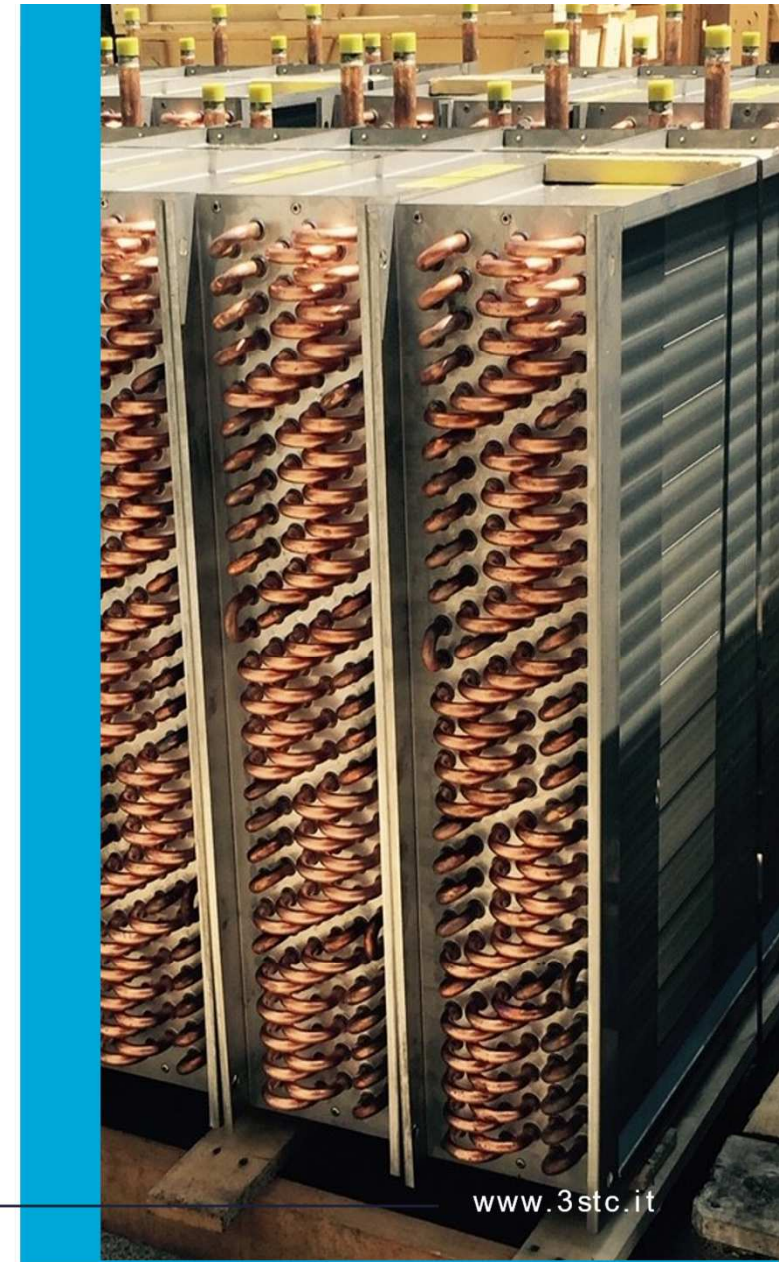
FIN BLOCK COILS



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PRODUCT EXAMPLE

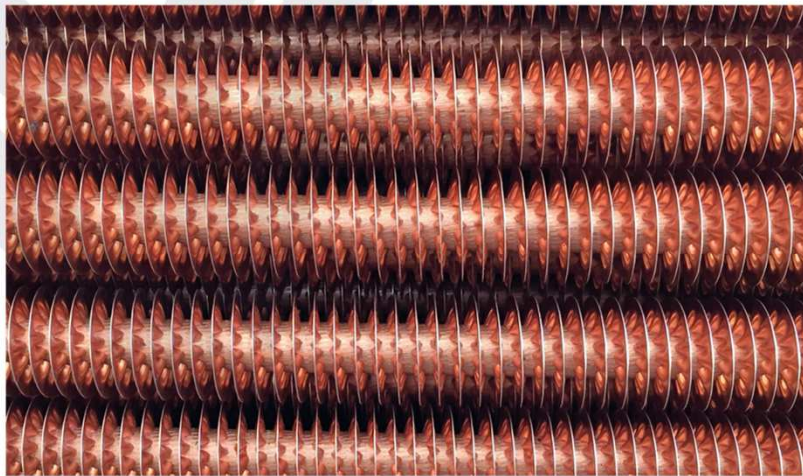
FIN BLOCK COILS



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PRODUCT EXAMPLE

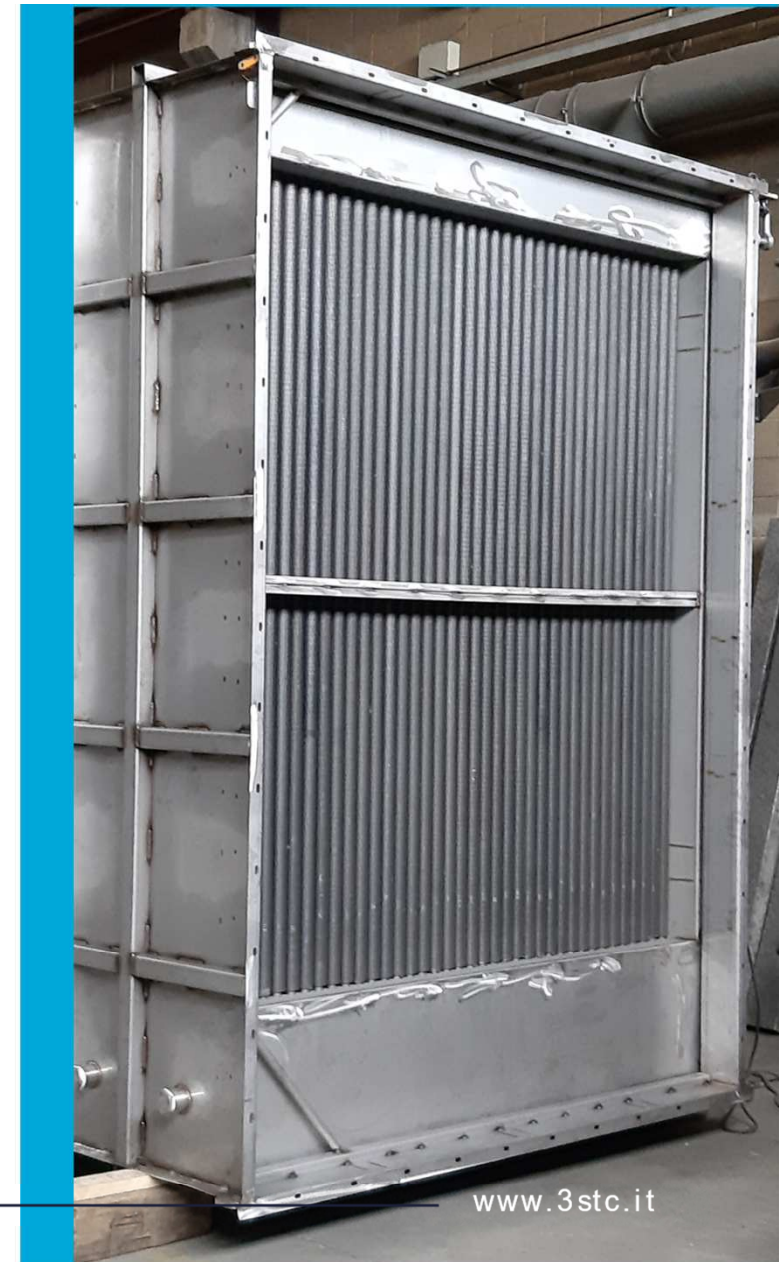
SPIRALS FIN COILS



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PRODUCT EXAMPLE

SPIRALS FIN COILS



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PRODUCT EXAMPLE

BARE TUBE COILS



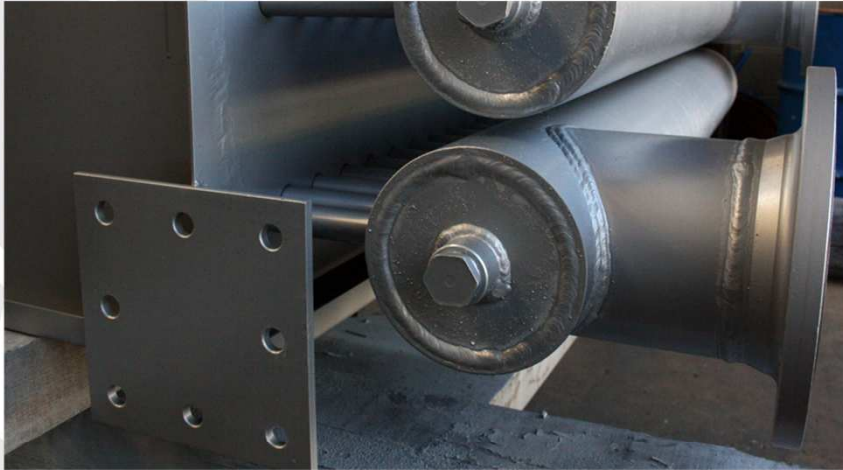
www.3stc.it

PRODUCT EXAMPLE

BARE TUBE COILS



SPECIAL CONSTRUCTION



SPECIAL CONSTRUCTION

