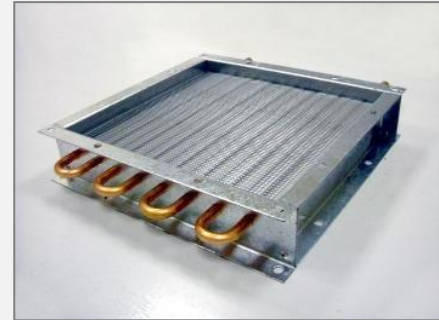


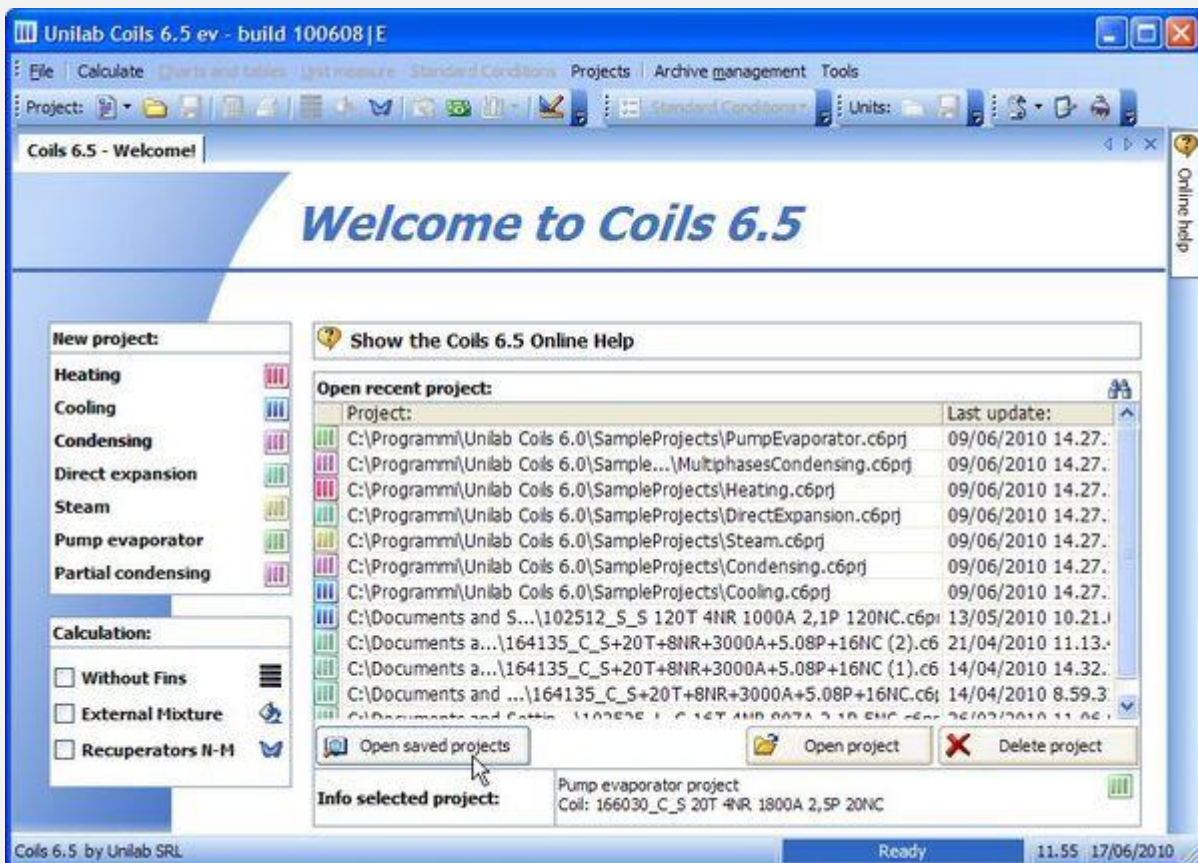
## What is UNILAB COILS?

UNILAB COILS is the calculation engine for coils heat exchangers, widely used in many fields, both domestic and industrial market, from HVAC (heating, ventilation, air conditioning) up to energy heat recovery, ever more recently used. This calculation's engine is the result of over 25 years of experience gained in the development of technical software by UNILAB.



## UNILAB COILS, the right solution for:

- HVAC companies
- Energy Power
- Food and Beverage Industry
- Automotive.

Unilab Coils 6.5 ev - build 100608 | E

File Calculate Charts and tables Unit measure Standard Conditions Projects Archive management Tools

Project: Standard Conditions Units:

Coils 6.5 - Welcome!

## Welcome to Coils 6.5

Online help

**New project:**

- Heating
- Cooling
- Condensing
- Direct expansion
- Steam
- Pump evaporator
- Partial condensing

**Calculation:**

- Without Fins
- External Mixture
- Recuperators N-H

**Show the Coils 6.5 Online Help**

**Open recent project:**

Project:	Last update:
C:\Programmi\Unilab Coils 6.0\SampleProjects\PumpEvaporator.c6prj	09/06/2010 14.27.
C:\Programmi\Unilab Coils 6.0\Sample...\MultiphasesCondensing.c6prj	09/06/2010 14.27.
C:\Programmi\Unilab Coils 6.0\SampleProjects\Heating.c6prj	09/06/2010 14.27.
C:\Programmi\Unilab Coils 6.0\SampleProjects\DirectExpansion.c6prj	09/06/2010 14.27.
C:\Programmi\Unilab Coils 6.0\SampleProjects\Steam.c6prj	09/06/2010 14.27.
C:\Programmi\Unilab Coils 6.0\SampleProjects\Condensing.c6prj	09/06/2010 14.27.
C:\Programmi\Unilab Coils 6.0\SampleProjects\Cooling.c6prj	09/06/2010 14.27.
C:\Documents and S...102512_S_S 120T 4NR 1000A 2,1P 120NC.c6prj	13/05/2010 10.21.
C:\Documents a...164135_C_S+20T+8NR+3000A+5.08P+16NC (2).c6	21/04/2010 11.13.
C:\Documents a...164135_C_S+20T+8NR+3000A+5.08P+16NC (1).c6	14/04/2010 14.32.
C:\Documents and ...164135_C_S+20T+8NR+3000A+5.08P+16NC.c6	14/04/2010 8.59.3
C:\Documents and ...164135_C_S+20T+8NR+3000A+5.08P+16NC.c6	26/03/2010 11.06.

Open saved projects Open project Delete project

**Info selected project:** Pump evaporator project  
Coil: 166030\_C\_S 20T 4NR 1800A 2,SP 20NC

Coils 6.5 by Unilab SRL Ready 11.55 17/06/2010

## UNILAB COILS 6.5: Software for the design and rating of finned coils



### UNILAB COILS 6.5 LIGHT

One common calculation engine for all editions! Simple to use, user-friendly interface, UNILAB COILS 6.5 LIGHT Edition is the cheap and best solution for your Sales Dept.. Possibility to insert up to a maximum n° 4 geometries.

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### UNILAB COILS 6.5 STANDARD

More complete than UNILAB COILS 6.5 LIGHT Edition, but affordable for all budgets. In UNILAB COILS 6.5 STANDARD there's no limitation about the number of geometries to store in the database archive and we have integrated the simple geometry administration. Wide selection of tables and charts. In Direct Expansion, it is possible to use different equations and also to make the print of flow map. A system for fine calibration of the pump evaporator is available.

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### UNILAB COILS 6.5 PROFESSIONAL

UNILAB COILS 6.5 PROFESSIONAL is the most common version in the world. A professional software to finalize the most complex projects, with powerful tools available. Inserted a new great feature which allows you to design a series of coils, unit coolers, air coolers, remote condensers, dry coolers, condensing units, and motor-evaporators, making possible the automatic generation of catalogues and performance tables. Included a new application that gets to manage refrigerant cycles and also the determination of coil's cost. Thanks to UNILAB COILS 6.5 PROFESSIONAL it is possible to match in the coil an axial fan (selected from a database), making possible to calculate the balance point in automatic way. In the same way, in case of direct expansion coil and condensing coil, it is possible to match a compressor (selected from a database), allowing the program to calculate the evaporation temperature and condensing temperature.

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### UNILAB COILS 6.5 ENTERPRISE

Heat recovery, calculation of components in series, analysis of smooth tube and other fluids.. thanks to UNILAB COILS 6.5 ENTERPRISE all this is possible. Even more required by our customers, the ENTERPRISE Edition is the more detailed and comprehensive tool for advanced Technical Dept. of thermal engineering companies.

**UNILAB COILS 6.5: we have the solution that will suit your needs!**

## Why would you prefer UNILAB COILS 6.5?

UNILAB COILS 6.5 is the top selling UNILAB's software. What are the reasons of this success? Here are some:

### Several types of tubes and fins selectable from an archive

Do you build coils with one of the following tube types: Smooth, Microfin, Large Grooved or Hearing Bone?



Thanks to our COILS software you can design coils choose the fin type from an extensive archive: smooth, corrugated, pyramid, windowed or louvered.

### Available in four editions

UNILAB COILS 6.5 is available in four editions:

- LIGHT
- STANDARD,
- PROFESSIONAL
- ENTERPRISE.

The UNILAB COILS 6.5 is for every kind of budget!

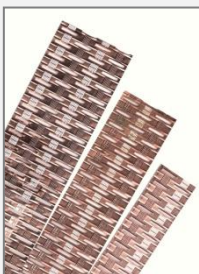
### Do you want to upgrade the edition? With UNILAB COILS you may do it!

One of the strenght of our software is the possibility to upgrade the license.

The structural module allows you to upgrade the UNILAB COILS license from a certain edition to another.

## Thermo-physic properties

One of the strength of our software has always been the availability of a wide fluid library with both monophasic (liquids, gas pure and mixture) and bi-phase fluids. We have pushed further in this direction, in facts we have completely renewed this part of the software, both from the management side and from the calculation of the thermo-physic and thermodynamic properties side. We have updated the refrigerants library to the last version of NIST which is version 8. In total we have added more than 100 new fluids. Furthermore we have maintained the possibility for the user to add its own fluids. The fluids management is very simple and flexible since each fluid is a small file that defines all the properties of the fluid. The use of fluid files instead of databases is better for the future operations of the update of the software.



### COILS for automotive radiators

We have the ideal solution for you if you are in the automotive industry and build radiators with rectangular tubes. With this new feature it is now possible to perform calculations in the

verification and design of radiators with linear fins to cool endothermic engines, both with aligned or staggered tubes.

### The importance to certificate your products

Several customers have achieved Eurovent or Ahri certification, by submitting Coils software to test their units. Compared to the laboratory test, COILS results on the power and pressure drop side are within a very acceptable range and many of our customers have achieved certification at the first attempt. Service subject to quotation: only customers that already use UNILAB COILS 6.5 PROFESSIONAL or ENTERPRISE may require this service.

## **UNILAB COILS is always more flexible and cheaper!**

### **UNILAB COILS: flexibility and convenience**

Always attentive to the needs of our customers, we have renewed the program introducing some modules that allow our partners to configure the licence of UNILAB COILS, according to their own constructive typologies.

The available modules are:

- Module "A", that includes the calculation's typologies: Heating, Cooling and Steam,
- Module "B", that permits to design units in Direct Expansion, Condensing and Pump Evaporator,
- Module "COMPLETE", including all the calculation's typologies (Heating, Cooling, Steam, Direct Expansion, Condensing and Pump Evaporator).

The new structure allows the final user to save considerably on the cost of a new licence.

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### **Increase the sales with UNILAB MCOILS**

Do you need to distribute the software to your customers/agents/distributors/consultants? UNILAB has introduced a new useful product, support for your distribution network.

UNILAB MCOILS is the new UNILAB product for all customers that already use UNILAB COILS, that, at a very low cost, allows:

- to reduce the workload of the Technical Department
- to improve communication with clients and cutting the response time
- to increase the relationship with the customer.



### **Some feature of UNILAB MCOILS**

Thanks to UNILAB MCOILS too your internal and external distribution network can create some calculation's projects in an autonomous, bypassing your Technical Department, that in this mode it can focus their own attention to the development of new products.

The calculation engine of mCoils is the same of COILS 6, therefore the management of thermo-fisic properties of fluids and refrigerants and the calculation modalities are unchanged.

UNILAB offers the possibility to all our customers COILS to purchase mCOILS at particularly advantageous prices. Different packages by 5, 10, 15 and 20 are available.

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Technical features available in UNILAB COILS 6.5 - Main Description		L	S	P	E
<b>Geometries</b>	Possibility to insert up to maximum n° 4 geometries, which users may select from archive or insert ex novo	•			
“	Wide archive of geometries		•	•	•
“	Possibility to add new geometries		•	•	•
“	Calculation of radiators used usually in the Automotive field: with rectangular tubes or with Rounded rectangular tubes	•	•	•	•
<b>Management of archives</b>	Fluid properties: Liquid (pure and mixtures), Gases (pure and mixtures), Refrigerants (wide library, ref. REFPROP 8 – NIST)	•	•	•	•
“	Fluid properties: Added new refrigerants R1234YF and R1234ZF	•	•	•	•
“	Archive of materials: Tubes, Fins, Manifolds	•	•	•	•
<b>Calculation modalities</b>	N° 3 Calculations: Module “A” (Heating, Cooling and Steam), Module “B” (Condensing, Direct Expansion and Pump evaporator), or Module COMPLETE (A+B)	•	•	•	•
“	Calculation: in Design and in Verify	•	•	•	•
<b>Condensing</b>	Overheating and subcooling analysis	•	•	•	•
“	Analysis of each phases (deoverheating, condensing, subcooling) with the calculation of each surface’s portions			•	•
<b>Direct Expansion</b>	Possibility to use different equations for the calculation in Direct Expansion		•	•	•
“	Flow map printout		•	•	•
“	Distributors selection			•	•
<b>Pump Evaporator</b>	System for fine calibration of the pump evaporator		•	•	•
“	Possibility of using alternative method of calculation for pump evaporator			•	•
<b>Other options</b>	Simulation with skipped tubes	•	•	•	•
“	Multi-factor			•	•
“	Possibility to set the number of baffles in the frontal surface			•	•
<b>Determination of coil’s cost</b>	Implemented fast mode for the calculation of coil cost calculation			•	•
“	Detailed coil cost calculation			•	•
<b>Refrigerant cycles</b>	Calculation of the refrigerant cycle of units made of a condenser, a compressor and an evaporator			•	•
“	Calculation and diagram of refrigerator cycle			•	•
“	Line pressure drops			•	•
<b>Balance point</b>	Calculation of the balance point with axial fans and compressors (including archive administration)			•	•
<b>Recuperators</b>	M-N heat recovery coil analysis				•
“	Printout for 1-1 recuperator coil with coils drawing				•
“	Additional information concerning the performance of heat recovery system				•
<b>Components in series</b>	Calculation of components in series: coils, compressors, mixing boxes				•
<b>Smooth tube analysis</b>	Available in all no. 6 calculation typologies: heating, cooling, condensing, direct expansion, steam and pump evaporator				•
<b>Other fluids outside tubes</b>	(Not air) – Available in all no. 6 calculation typologies: heating, cooling, condensing, direct expansion, steam and pump evaporator				•

<b>Other functionalities available in UNILAB COILS 6.5 - Main Description</b>		<b>L</b>	<b>S</b>	<b>P</b>	<b>E</b>
<b>Activation</b>	Activation with USB key. Physical delivery (backup copy CD and USB key) by courier	•	•	•	•
“	On demand, with price integration, possibility to activate the software by only software activation	•	•	•	•
<b>Upgrade &amp; maintenance</b>	Unilab provides the technical support only to customers with regular subscription of maintenance contract	•	•	•	•
<b>Technical support</b>	Automatic renewal of maintenance contract, except the receipt of written notice within 3 months before the expiring date	•	•	•	•
“	The annual quote covers maximum n° 3 technical licenses	•	•	•	•
<b>True update</b>	Online upgrade to the latest release in real time	•	•	•	•
<b>Eurovent &amp; Ahri</b>	Support on demand: available only for customers with regular subscription of maintenance contract			•	•
“	Support on demand: Service taxable to quotation, based on certain parameters (numbers of geometries, calculation's typologies, etc.)			•	•
<b>Management of languages</b>	Software available in the following languages: Italian, English, German, French, Turkish, Russian, Spanish and Brazilian	•	•	•	•
“	Unicode support for non latin alphabets	•	•	•	•
“	Possibility to include more languages by Excel file: up to no. 10 languages			•	•
<b>Project's archive</b>	Calculations can be saved in files, for easy cataloguing	•	•	•	•
“	Possibility to save the output data in EXCEL format			•	•
<b>Customizations</b>	Customization view of the project details	•	•	•	•
“	Logo customization	•	•	•	•
“	Program Page Builder Light for the customization of the current printout or the addition of new ones			•	•
<b>Drawings</b>	EMF Drawings insertion	•	•	•	•
“	Possibility to converter DXF/DWG drawings to EMF format	•	•	•	•
<b>Script</b>	Quote calculation script	•	•	•	•
“	VB Script Engine for special calculation			•	•
<b>Printouts</b>	Printouts in PDF and in WORD format and PDF file export	•	•	•	•
“	Management of own printouts by WORD template			•	•
<b>Units of measurement</b>	Customizable units of measurement	•	•	•	•
“	Transformation of units of measurement in print preview, with the option to hide the lines			•	•
<b>Geometry's administration</b>	Simplified geometry administration		•	•	•
<b>Tables &amp; charts</b>	Capacity in function of rows number, of the number of circuits, of air flow, of the fluid inlet temperature (fixed air-fluid delta T)		•	•	•
“	Air pressure drop in function of air flow		•	•	•
“	Fluid pressure drop in function of fluid air flow, of the number of circuits		•	•	•
“	Fan balance point, Compressor balance point		•	•	•
<b>Catalogues</b>	Automatic generation of catalogues and performance tables			•	•

## **UNILAB COILS 6.5 the most widespread tool for the design of Coils Heat Exchangers**

UNILAB COILS 6.5 is the result of more than 23 years of specialized and professional experience gained from experimental data and cutting edge scientific knowledge.

Our many satisfied customers around the world consider UNILAB COILS the best tool for the calculation of air cooled units, fan coil units, air coils, industrial chillers, room air conditioning, and air handling units to name a few.

**UNILAB testimonials, spread around the world, are its best business card. Become an UNILAB's partner!**



**Contact us for further information!**

**UNILAB SRL – Solution for your business**

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