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## User's manual

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230308-EN\_rev6

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## 1. Introduction and access

**PHE manager WEB software** has been developed to answer to the needs of a large amount and different types of customers. To better answer to specific needs, some functions may not be available for the assigned profile.

This document is a general user guide of **PHE manager WEB software**.

**WARNING: For all versions, checking of CHEMICAL COMPATIBILITY between fluids and materials of construction is on user charge! Contact us for support.**

- Connect to <https://phemanager.cipriani-phe.com/#/login> and sign in with the email and password given.
- In the next page, read and accept the license agreement and the Privacy Statement and press the Save&Continue button.

### Please Sign In

Login (email)

Password

Login

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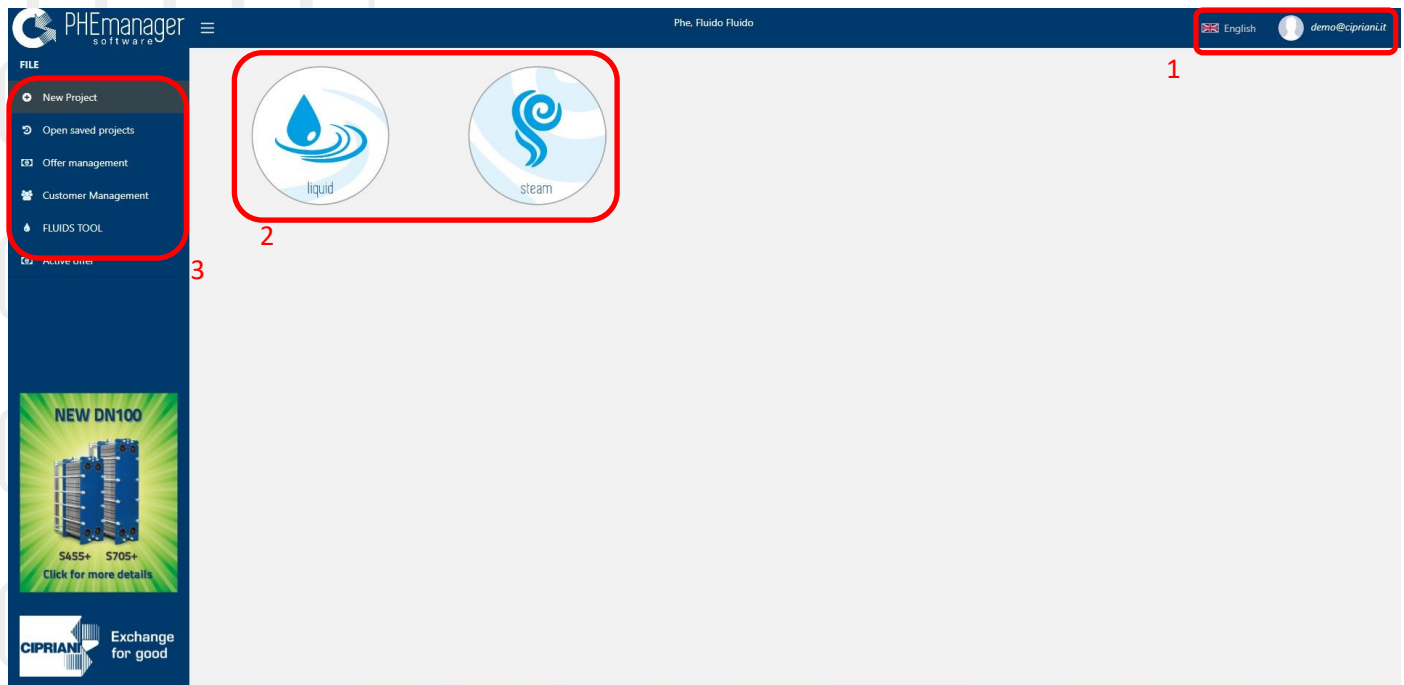
LOGOUT      SAVE & CONTINUE



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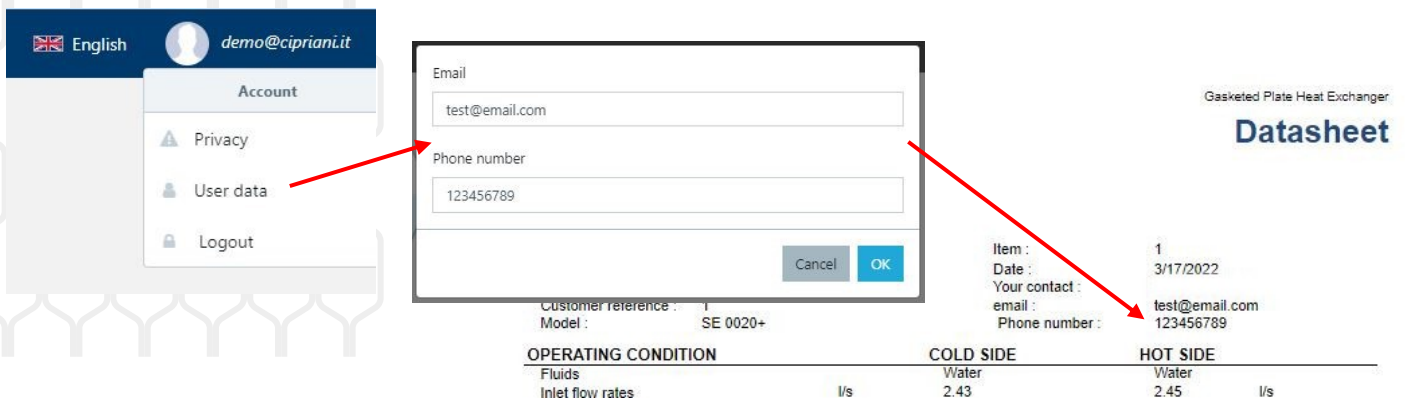
## 2. Homepage

The starting window is a sort of menu that allows you to browse quickly within the software. In this page is possible to select the language, insert User's data and log out (1), quickly start a project for liquid-liquid or vapor-liquid applications (2) or browse through the other functions by means of the dedicated menu (3).



### User's data (1):

In the drop-down menu, it is possible to open a form to insert the email and the telephone number shown inside offer printout. If those are left blank, the email in the offer printout will be the one used to register the user, while the telephone number will not appear.



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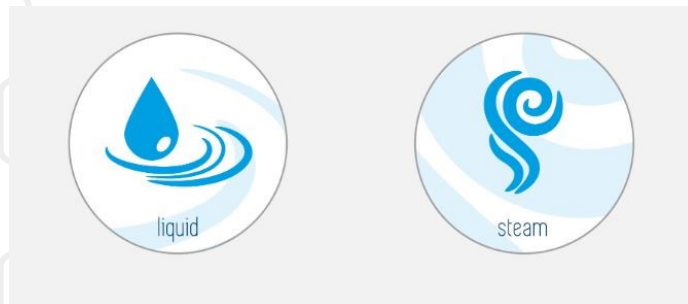
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### 3. New project

To create a new project, click on the “liquid” or “steam” icon or press “New project” on the left side menu. The side menu allows you to recall previous projects using the “recent projects” tab.



Once the desired application (liquid-liquid or vapor-liquid) is selected, the thermal configuration page will open.

The screenshot shows the PHEmanager software interface for configuring a heat exchanger. The interface is divided into several sections:

- Left Sidebar:** Contains navigation options like "New Project", "Open saved projects", "Offer management", "Customer Management", "FLUIDS TOOL", and "Active offer". A "NEW DN100" banner is also present.
- Central Configuration Area:** Contains various input fields for project details, including "Calculation type", "Calculation mode", "Type of PHE", "Design standard", "Product line", "Design pressure (PS)", "Design temperature (TS)", "Plates material", "Gaskets material", and "Frame material".
- Right Sidebar:** Contains additional parameters like "Capacity", "Total oversizing", "Heat transfer area", "Heat transfer coeff. (calc. / req.)", "LMTD", and "Fouling factor (calc.)".
- COLD SIDE and HOT SIDE Panels:** These panels allow for configuring the fluid flow rate, inlet and outlet temperatures, pressure drop, operating pressure, and fouling factor for both sides of the heat exchanger.
- Bottom Right Configuration Area:** Contains options for "Fixed No. of passes", "Pressure drop filter %", "Price filter %", and "Total oversizing (req. %)".



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### 3.1. Product configuration (1)

#### A. Calculation type:

- a. **Selection:** allows **PHE manager software** select the list of PHE able to best satisfy the required input data (including thermal pattern and required pressure drops, but also PS, TS, plates materials and thickness, gaskets materials). The software according to input data sets product configuration automatically. In most cases, "Selection" mode is the correct calculation mode you should use to make a quotation.
- b. **Checking:** to check how an existing PHE (code) satisfies the required input data. Product configuration has to be set manually.
- c. **Simulation:** to evaluate actual outlet temperatures and capacity given by an existing PHE (code) by giving as an input the inlet temperatures and flow rates. Product configuration has to be set manually.

#### B. Type of PHE:

- a. **GPHE:** Gasketed plate heat exchanger.
- b. **BPHE:** Brazed plate heat exchanger.

#### C. Design standard:

- a. **PED 2014/68/EU:** Mandatory for all PHE supplied in EU
- b. **Manufactured (extra-UE):** Alternative standard for PHE supplied in outside of EU.

#### D. Product line:

- a. **Standard:** No specific compliance or certification.
- b. **Industrial:** Include more specific configurations (this product line is not always available).
- c. **ACS:** Attestation de Conformité Sanitaire (valid in France).
- d. **Double-wall:** double-wall plate product line.

#### E. Design Pressure (PS), Design Temperature (TS):

- a. These are design data/customer's requirements usually indicated in the offer request, tender or technical specification. These are used by the software, among other things, to determine the PED 2014/68/EU classification.

#### F. Plates, gaskets and frame materials:

- a. It is possible to select different materials for gaskets, plates or frames. According to the TS selected, some gaskets materials might not be available. In "Selection" mode, PHE manager WEB software will automatically chose the thinnest plates available.
- b. The  **Plates material** filter, if unticked, disable the plates material filter: all materials will be shown in the selection list.



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### 3.2. Product parameters (2)

In this menu is possible to select the thermal power and to visualize some parameters (total oversizing, heat transfer area, heat transfer coefficient, LMTD and fouling factor) of the selected PHE.

### 3.3. Thermal program (3)

#### A. Fluid selection:

- a. When selecting a fluid, type the initial letter to enable the quick finder. **PHE manager WEB** will show you the first fluid with that specific initial letter. Press the initial letter to move through the list then press "Enter" to select the desired one.

#### B. Insert thermal pattern:

- a. Insert required thermal pattern: 5 inputs are required (+ required pressure drops on both sides). Most commonly used parameters combinations are:
  - Capacity + Inlet & Outlet Temperatures on both sides of the PHE + required pressure drops on both sides.
  - Capacity + Inlet Temperatures & Flow Rates on both sides of the PHE + required pressure drops on both sides.
  - Inlet & Outlet Temperatures on both sides of the PHE + Flow Rate on one side + required pressure drops on both sides.
- b. Operating pressures: actual service pressure inside each circuit.
- c. Fouling factor: Default value of fouling factor between the plates is 0. If a specific fouling factor is required, you can add and it will be considered in the calculation.

All the parameters could be inserted by using the different units of measurement selecting them from the drop-down menu. Pressure, for example, is measured by default in kPa, but could be measured in bagG (gauge) or in mCH<sub>2</sub>O (meters of water) or in PSI (pound-force per Square Inch). Changing the units of measurement, selections can be adapted to different requirements of where the PHEs are installed. On first access to the software, common units of measurement are used by default. If different units should be used, you can change them from the drop-down menu and calculate the solutions. When the first projects with the new units of measurement is saved, the software retain the units selections and them became the new defaults units on the next projects.



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### 3.4. Others parameters (4)

#### A. Insert other parameters:

- Fixed number of Passes:** if flagged, **PHE manager WEB software** will offer solutions with the specified number of passes. Default value is 1 but, if needed, you can also fix a different No. of passes (up to 5). Remove the flag to view all possible solutions.
- Pressure drop filter:** if flagged, **PHE manager WEB software** will offer solutions with pressure drops exceeding the required pressure drops up to the indicated value (% vs. required value).
- Price filter:** if flagged, **PHE manager WEB software** will offer solutions with price exceeding the cheapest solution up to the indicated value (% vs. best solution price).
- Minimum oversizing:** if=0 (default value) **PHE manager WEB software** will offer the minimum possible oversizing value (ideal=0); if>0, **PHE manager WEB software** will offer solutions with oversizing exceeding the best solution. Minimum oversizing value proposed in this case is the indicated value (%).

### 3.5. Calculation

Click on "CALCULATE" to obtain solutions.

List Price	GEOMETRY	Plates A [%]	Connections	No. of passes	No. of plates	Thickness [m]	Heat transfert area [m <sup>2</sup> ]	Total oversizing (calc.) [%]	PD (cold side) [kPa]	PD (hot side) [kPa]	PED	Plates materia l	W x H x L [m]
829.80	0020+A	100	DN32 / J-J	1 - 1	27	0.4	0.52	23.05	43.22	44.36	-	AISI 316L (EN 1.4404)	200 x 320 x 25 1
1188.00	0040+A	100	DN32 / J-J	1 - 1	33	0.4	1.27	171.32	46.62	48.01	-	AISI 316L (EN 1.4404)	200 x 470 x 35 1
1701.60	0070+B	0	DN50 / J-J	1 - 1	9	0.4	0.54	13.31	26.89	26.87	-	AISI 316L (EN 1.4404)	310 x 678 x 40 8
1764.40	0070+M	50	DN50 / J-J	1 - 1	11	0.4	0.70	84.95	45.27	45.56	-	AISI 316L (EN 1.4404)	310 x 678 x 40 8
1952.80	0070+A	100	DN50 / J-J	1 - 1	17	0.4	1.16	200.79	42.20	42.55	-	AISI 316L (EN 1.4404)	310 x 678 x 40 8
2040.60	0110+B	0	DN65 / J-J	1 - 1	7	0.4	0.59	19.28	25.06	25.41	-	AISI 316L (EN 1.4404)	385 x 729 x 40 8
2046.30	0080+A	100	DN32 / J-J	1 - 1	45	0.4	3.46	540.50	48.01	49.00	-	AISI 316L (EN 1.4404)	200 x 755 x 35

### 3.6. Choosing the solution

#### A. Choose your favorite solution in the list of offered solutions:

- **PHE manager software** will offer a list of PHE capable to satisfy required input parameters.
- The list of solutions is provided in ascending price order.
- The selected solution is highlighted in light blue;
- Solutions with warnings are highlighted in yellow and the warning can be visualized with the triangle icon that appears in the last column. The warning does not prevent the selection of the PHE, but gives additional informations to further improve the PHE efficiency and reliability, when needed.

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When there are conditions that prevent the PHE selection, the list will be blank and a message inform the user about the problem.

- By moving through the list with the mouse, details for each solution are shown.
- Click on the folder icon in the last column to go on with the configuration.

After the selection of a PHE, the grey cells are automatically filled with the values calculated by the software:

- Total oversizing:  $\frac{K_{calc.} - K_{req.}}{K_{req.}} \cdot 100$ , where  $K_{calc.}$  is the global heat transfer coefficient of the selected PHE, and  $K_{req.}$  The global heat transfer coefficient required by the thermal program.
- Heat transfer coefficient (calculated/required)
- LMTD: Logarithmic mean temperature difference
- Fouling factor calculated
- Pressure drop into connections
- Fluid velocity into connections
- Fluid velocity into channel
- Reynolds number into channel
- Shear Index: is an adimensional index used by Cipriani to take into account the wall shear stress.

### 3.7. Checking mode

Once a solution is selected, **PHE manager software** automatically sets in “Checking” mode .

In this calculation mode, if necessary, you can modify product configuration (e.g. change No. of plates or plates material or plates thickness) to optimize the solution.

Calculation type Checking	Capacity	kW	100	100	Heat transfer coeff. (calc. / req.)	W/(m <sup>2</sup> K)	10674	3934
	Total oversizing	%	171,32		LMTD	°C	20	
Type of PHE GPHE (Gasketed)	Heat transfer area	m <sup>2</sup>	1,28		Fouling factor (calc.)	(m <sup>2</sup> K)/W	0,00016051	
Design standard PED 2014/68/EU	<b>COLD SIDE</b>				<b>HOT SIDE</b>			
Product line Standard	Fluid	Water		Water		Water		
Design pressure (PS) 10 bar	Fluid flow rate	m <sup>3</sup> /h	8,7317	Fluid flow rate	m <sup>3</sup> /h	8,8072		
Design temperature (TS) 80 °C	INLET temperature	°C	50	INLET temperature	°C	80	80	
Plates material AISI 316L (EN 1.4404)	OUTLET temperature	°C	60	OUTLET temperature	°C	70	70	
Plates thickness 0,4 mm	Pressure drop (req. / calc.)	kPa	50	Pressure drop (req. / calc.)	kPa	50	46,62	
Gaskets material NBR	Operating pressure	bar G	5	Operating pressure	bar G	5		
Frame material Carbon steel	Fouling factor (required)	(m <sup>2</sup> K)/W	0	Fouling factor (required)	(m <sup>2</sup> K)/W	0		
PLATES GEOMETRY 0040+	Pressure drop (connections)	kPa	7,0361	Pressure drop (connections)	kPa	7,0795		
A - High efficiency channels	Fluid velocity (connections)	m/s	2,6715	Fluid velocity (connections)	m/s	2,6946		
	Fluid velocity (channel)	m/s	0,557	Fluid velocity (channel)	m/s	0,5618		
	Reynolds		5229	Reynolds		6959		
	Heat transfer coefficient	W/(m <sup>2</sup> K)	27620	Heat transfer coefficient	W/(m <sup>2</sup> K)	29450		
	Shear index (Not.Recc.<1; Opt.>2)		5	Shear index (Not.Recc.<1; Opt.>2)		5,17		
	No. of plates		33	No. of plates				
	No. of passes		1	No. of passes		1		

Once completed the optimization job, click on “Next” to go on with the quotation.

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### 3.8. PHE quotation

Once that the PHE is selected and confirmed, the quotation page is opened. In this page it is possible to add options, accessories and select the connections.

- All options and accessories available for selected model are listed and quoted.
- Click on connections code to obtain the complete list of connections available for selected model.
- Accessories are automatically filtered in order to match the PHE selected and the operating conditions. However full compatibility of accessories may not always be guaranteed. Some exceptions: stud bolts are not always suitable with all the connections (e.g threaded connections) and plate pack protection are not useful if thermal insulation is fitted.
- Flag desired accessories to add them to the quotation.
- Add a discount, if necessary.

OPTIONS / ACCESSORIES

PLATE HEAT EXCHANGER (Connections incl.)

<input checked="" type="checkbox"/>	SE#0020+027A00PNV0J11		€ 829,80
<input checked="" type="checkbox"/>	PORTS (hot side / cold side)	JJ : Threaded nozzles AISI 316 / Threaded nozzles AISI 316	€ 89,80
<input checked="" type="checkbox"/>	% increase of plates number for future extensions of plates' pack	0%	Req. extension: 27p. (Frame max: 29p.)

OPTIONS

<input type="checkbox"/>	AISI 304 tightening bolts	€ 75,00
<input type="checkbox"/>	AISI 304 tightening bolts with brass nuts	€ 144,00
<input type="checkbox"/>	AISI 304 guiding bars	€ 129,00
<input type="checkbox"/>	Special coating / RAL 5003	€ 95,30

ACCESSORIES

<input type="checkbox"/>	Thermal insulation FL (-10°C / +110°C)	€ 159,00
<input type="checkbox"/>	Thermal insulation TF (-10°C / +130°C)	€ 227,00
<input type="checkbox"/>	Plate pack protection sheet (AISI 304)	€ 293,00
<input type="checkbox"/>	Drip tray with drainage (AISI 304)	€ 231,00
<input type="checkbox"/>	Brackets (galvanized carbon steel)	€ 87,60
<input type="checkbox"/>	No. 4 carbon steel counter-flanges (bolts included)	€ 175,00
<input type="checkbox"/>	Nameplate in stainless steel	€ 216,00
<input type="checkbox"/>	Hydraulic pressure test (without drying)	€ 388,00
<input type="checkbox"/>	...	0
<input type="checkbox"/>	...	0

TOTAL	LIST PRICE	DISCOUNT	NET PRICE
Plate Heat Exchanger (Options incl.)	€ 829,80	0	829,8
Accessories	€ 0,00	0	0
<b>PLATE HEAT EXCHANGER + ACCESSORIES</b>	<b>€ 829,80</b>	<b>0</b>	<b>829,8</b>

REMARKS

← BACK
SAVE ADD TO OFFER NEXT

#### Extended frame option:

This option permit to verify future expansions of plates' pack and to extend, if necessary, the frame length. The drop-down menu select the desired % of increase of the installed number of plates for future pack expansions. The software, if necessary, automatically select a longer frame to satisfy the selected value and update prices and accessories accordingly. Every frame length change is reported by a warning message.

Note: this options does not change the number of installed plates, but only the capacity of add more plates in the future. The maximum number of plates that the frame can hold is change accordingly. It is only permit to change to the immediately following frame length.

PLATE HEAT EXCHANGER (Connections incl.)

<input checked="" type="checkbox"/>	SE#0020+027A00PNV0J11		€ 838,80
<input checked="" type="checkbox"/>	PORTS (hot side / cold side)	JJ : Threaded nozzles AISI 316 / Threaded nozzles AISI 316	€ 89,80
<input checked="" type="checkbox"/>	% increase of plates number for future extensions of plates' pack	20%	Req. extension: 33p. (Frame max: 49p.)

!!! Attention: extended frame and updated prices.

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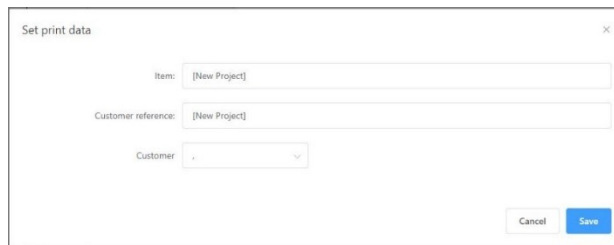
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After adding options and accessories, save, add to an offer or print the project.

## 1. Saving the project

If necessary, save the project by clicking on “save”. Specify item, customer reference and select the customer from the drop-down menu.



Set print data

Item: [New Project]

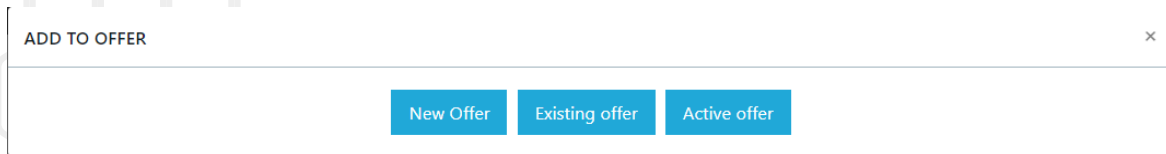
Customer reference: [New Project]

Customer: [v]

Cancel Save

## 2. Add to an offer

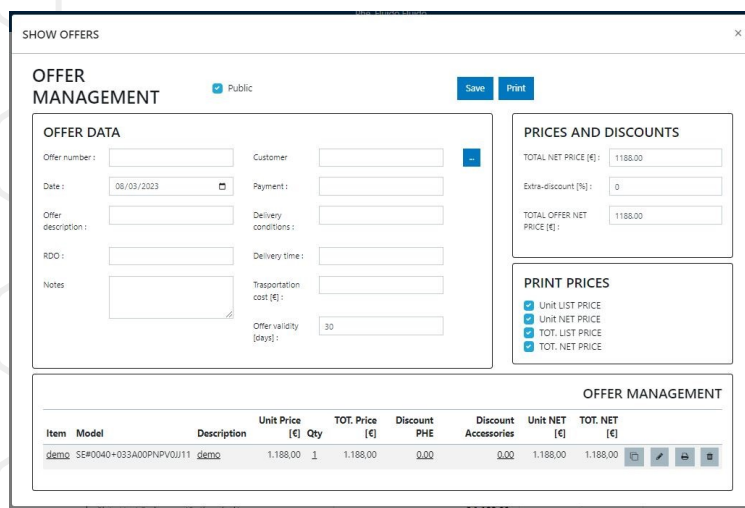
The “add to offer” button add the current project to a new offer, an existing offer or the active offer.



ADD TO OFFER

New Offer Existing offer Active offer

- a. New offer: open the offer management with a new offer. Save to add the project to a new offer after inserting all the necessary data.



SHOW OFFERS

OFFER MANAGEMENT Public Save Print

OFFER DATA

Offer number: [ ] Customer: [ ]

Date: 08/03/2023 Payment: [ ]

Offer description: [ ] Delivery conditions: [ ]

RDO: [ ] Delivery time: [ ]

Notes: [ ] Transportation cost [€]: [ ]

Offer validity (days): 30

PRICES AND DISCOUNTS

TOTAL NET PRICE [€]: 1188,00

Extra-discount [%]: 0

TOTAL OFFER NET PRICE [€]: 1188,00

PRINT PRICES

Unit LIST PRICE

Unit NET PRICE

TOT. LIST PRICE

TOT. NET PRICE

OFFER MANAGEMENT

Item	Model	Description	Unit Price [€]	Qty	TOT. Price [€]	Discount PHE	Discount Accessories	Unit NET [€]	TOT. NET [€]
demo	SE#0040+033A00PNPV0011	demo	1.188,00	1	1.188,00	0,00	0,00	1.188,00	1.188,00

- b. Existing offer: select the offer from the existing offers list and click on “ok” in order to add the project to the selected offer.



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ADD TO EXISTING OFFER

OFFERS

Export offers Search offers

Filter Type and click the magnifying glass to search

Per page 30


<< 1 >>

Id	Offer number	Offer description	Date	Company name	Reference	Total offer net price [€]	Public
40174			8/3/2023			1.188,00	✓
40173			8/3/2023			1.188,00	✓
40172			8/3/2023			1.188,00	✓
40171			8/3/2023			1.188,00	✓
40170			8/3/2023			0,00	✓


Cancel OK

c. Active offer: add the project to a previous offer selected as active.

### 3. Replace in offer

The “replace in offer” button, it is possible to replace an item inside the active offer with the selected one, by pressing the  button inside the offer item to be replaced.

OFFER MANAGEMENT

Item	Model	Description	Unit Price [€]	Qty	TOT. Price [€]	Discount PHE	Discount Accessories	Unit NET [€]	TOT. NET [€]	
demo	SE#0040+033A00PNPV0JJ11	demo	1.188,00	1	1.188,00	0,00	0,00	1.188,00	1.188,00	

### 4. Print the project

By clicking on “Next”, it is possible to print the project after inserting the print data required and the customer selected from the menu.

Set print data

Item: [New Project]

Customer reference: [New Project]

Customer: [v]

Cancel Save

Once saved, the project print will open in a new tab on the browser (popup).



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Print layouts

- Datasheet
- Datasheet (complete)
- Specification
- Export PDF
- Export WORD

Gasketed Plate Heat Exchanger  
**Datasheet**

Customer contact: [blank]      Item: [blank]      Date: 5/20/2022  
 email: [blank]      Your contact: [blank]      email: test@email.com  
 Customer reference: SE 0070+      Model: [blank]      Phone number: 123456789

OPERATING CONDITION		COLD SIDE		HOT SIDE
Fluids		Water		Water
Inlet flow rates	m <sup>3</sup> /h	8.73		8.81
INLET temperatures	°C	50.0		80.0
OUTLET temperatures	°C	90.0		70.0
Pressure drop (calc.)	kPa	26.89		26.87
Operating pressure	bar G	5.000		5.000
Capacity	kW		100.00	
Total oversizing	%		13.31	

**FLUID PROPERTIES**

Density	kg/m <sup>3</sup>	985.91		975.00
Specific heat capacity	J/(kg K)	4182		4192
Thermal conductivity	W/(m K)	0.649		0.667
Dynamic viscosity	cP	0.5041		0.3779

**PRODUCT CONFIGURATION**

Product code	SE#0070-009800PNPWUJ11
Frame material	Carbon steel
Plates (material / thickness)	AISI 316L (EN 1.4404) / 0.4 mm
Gaskets (material / type)	NBR / Glue-free Plug-in-B design
Connections size	DN50
Connections type	Threaded nozzles
Connections material	AISI 316
Fluids position (inlet -> outlet)	F3 -> F4
No. of passes	1
Relative directions of fluids	Counter Current
Max. number of plates allowed on frame	41

**DESIGN**

Design standard	PED 2014/68/EU
PED risk category	Art. 4.3 (Gr. 2 - L) / -
Pressure (design / test)	bar
Temperature (min / design)	°C
Volume (each side)	l
Specific compliance and certification	

Language  
 clear selection  
 Italian  
**English**  
 French  
 German  
 Spanish  
 український

In the left menu, it is possible to select what will be shown: datasheet, complete datasheet or the specification.

It is also possible to export in PDF or Word format the printout.

At the end of the project print page, there is a internal technical string useful to manage the orders:

- Software version;
- List Price validity;
- User profile;
- User code string.

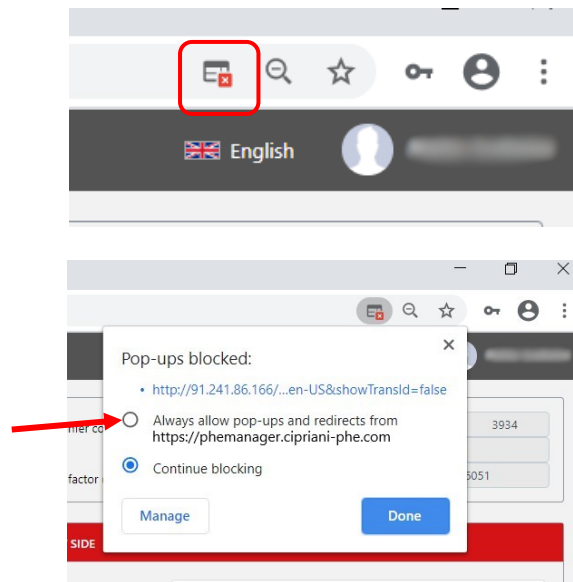
<https://www.cipriani-phe.com/>    [info@cipriani-phe.com](mailto:info@cipriani-phe.com)

PHE manager software W1.0 - 190723 - TIE1110 - C - 6fc6d163-b862-4588-a8c2-a76eef32a0a9

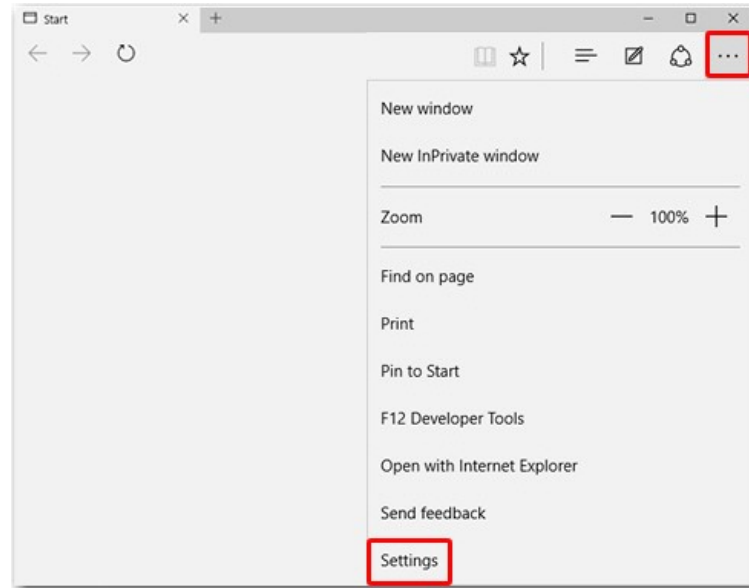
1/2

**Important:** if popups are blocked, the selection data sheet preview will fail. Is necessary to allow the popups in your browser.

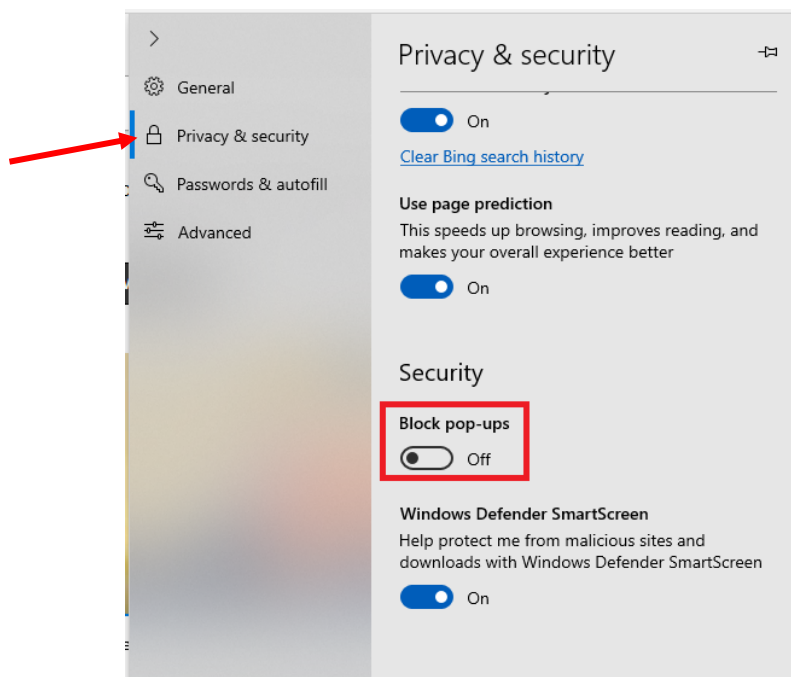
- Using **Chrome**, if the popup is blocked click on the icon on the upper right of the window and select “Always allow popups from ...”.



- In **Microsoft Edge**, press on the icon with three dots “...” in the upper right menu and select “settings”.



Select “Privacy and security” and turn “Block Popups” to OFF.





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In the print page, you can select the following three different print layouts from the left side menu:

- Compact datasheet + drawing
- Complete datasheet + drawing (if available to the current profile).

It is also possible to export the print layout by clicking on “Export Word” and “Export PDF”.  
Print language can be changed from the right side menu.

### 3.9. Open saved project

From the left side menu, it is possible to open the projects previously saved by clicking the dedicated button.  
In this page are shown all the project saved by the user or user of the same company. The projects can be opened, deleted or modified.

The projects can be filtered in the drop-down menu and the filter.

The screenshot shows the PHEmanager software interface. On the left is a dark blue sidebar menu with options: FILE, New Project, Open saved projects (highlighted), Offer management, Customer Management, FLUIDS TOOL, and Active offer. Below the menu is a promotional banner for 'NEW DN100' and the CIPRIANI logo. The main content area has a header with 'Select folder: Phe\_FluidoFluido' and a 'Filter:' input field. Below this is a table of saved projects with columns: Project Id, Md, File name, Date, By User, Company, and actions (Open, Delete). The table contains 10 rows of project data. At the bottom right of the table area, it says '1 - 10 of 131 items'.

Project Id	Md	File name	Date	By User	Company	Actions
92f3be47-61f8-45d0-820a-c937aa3c5e66	8	373	09:50 - Apr. 07, 2020		Cipriani Interno	Open X Delete
4b4f3083-095d-4de4-8389-6d38ff05b33c	8	[New Project]	12:45 - Apr. 06, 2020		Cipriani interno	Open X Delete
9e9587aa-ee09-4cde-8246-6a36760cd303	8	20040340	14:00 - Apr. 03, 2020		Cipriani Interno	Open X Delete
59a14181-66e5-4223-8edf-77b5e5c97769	8	20040339	13:58 - Apr. 03, 2020		Cipriani Interno	Open X Delete
83caeab3-41a0-4609-a088-b0e615d0526c	8	20040338	13:55 - Apr. 03, 2020		Cipriani Interno	Open X Delete
3cc72595-ccb6-49fa-a1d5-bacffb462c57	8	20040337	13:46 - Apr. 03, 2020		Cipriani Interno	Open X Delete
b1983908-891f-42bb-aa74-1b15f7e99974	8	20040336	13:38 - Apr. 03, 2020		Cipriani Interno	Open X Delete
7522036f-ecff-4e0c-8f6e-c2d8c8b66358	8	20040335	13:36 - Apr. 03, 2020		Cipriani Interno	Open X Delete





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## 4. Offer management

From the left side menu, it is possible to open the “Offer management” page by clicking the dedicated button. All the offers created by the user or user of the same company are shown in this page. Here it is possible to visualize, export or create new offers.

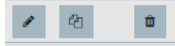

The menu (1) can be used to:

- Create new offers:** to create a new offer after inserting all the data required and the customer from the customer list. Different prices can be shown in printing page. Here it is possible to save, print or selected the current offer as active. If the public flag is selected, the offer is visible and editable by all the users inside the same company.

Item	Model	Description	Unit Price [€]	Qty	TOT. Price [€]	Discount PHE	Discount Accessories	Unit NET [€]	TOT. NET [€]
demo	SE#0040+033A00PNFV0J11	demo	1.188,00	1	1.188,00	0,00	0,00	1.188,00	1.188,00

- b. Set as active offer: to set the current offer as active, letting the user to quickly insert the project in this offer (see sec. 3.8.B.c).
- c. Export offers: to create a .csv file with the list of the offers generated.
- d. Search offers: to search the offer setting the filters.
- e. Set the number of offers shown in the page, and filter quickly by name.

Each offer can be:

- Modified, duplicated or deleted if the user is the creator of the offer (  ).
- Visualized or duplicated if the user is not the creator and the offer is public (  ).
- When an offer was made before a price list update, the software warns the price are not updated and offer to preview or do not update the prices.



By pressing “Do not update”, the offer remains with old prices (every time the offer will be re-open, the software ask to update); by pressing “Preview”, the software shows the new prices of PHE and accessories, offering to update or not them.

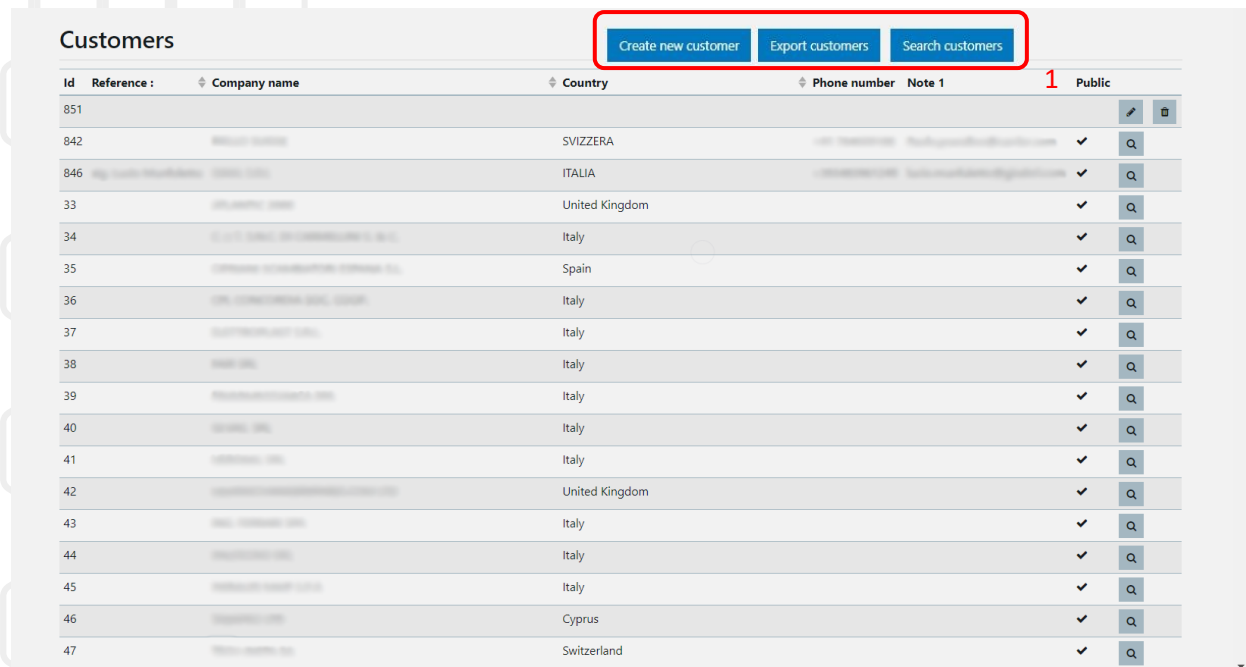


- If there is a project inside the offer, it is possible to duplicate, print or delete it (only print if the creator of the offer is different from the user that open it). Information like description, quantity or discount are shown and can be modified.

OFFER MANAGEMENT									
Item	Model	Description	Unit Price [€]	Q.ty	TOT. Price [€]	Discount PHE	Discount Accessories	Unit NET [€]	TOT. NET [€]
1	SE#0125+039B00HNPV0J11	*****	2.522,10	1	2.522,10	0,00	0,00	2.522,10	2.522,10

## 5. Customer management

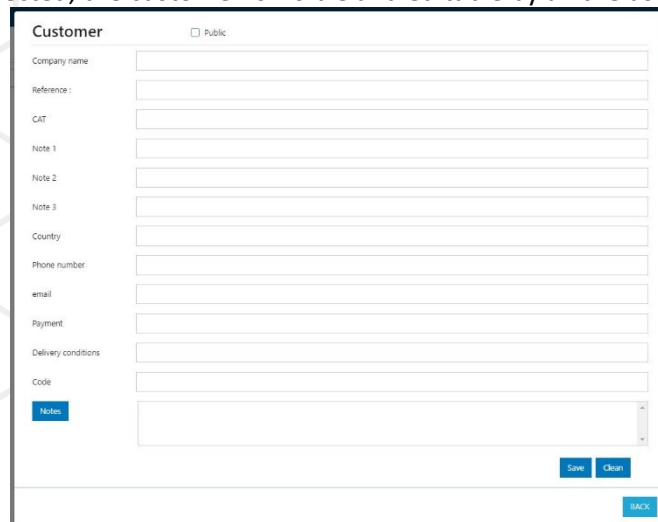
From the left side menu, it is possible to open the “Customer management” page by clicking the dedicated button. In this page are shown all customers created by the user or user of the same company. Here it is possible to visualize, export or create new customers.



Id	Reference :	Company name	Country	Phone number	Note 1	Public
851						<input type="checkbox"/>
842			SVIZZERA			<input checked="" type="checkbox"/>
846			ITALIA			<input checked="" type="checkbox"/>
33			United Kingdom			<input checked="" type="checkbox"/>
34			Italy			<input checked="" type="checkbox"/>
35			Spain			<input checked="" type="checkbox"/>
36			Italy			<input checked="" type="checkbox"/>
37			Italy			<input checked="" type="checkbox"/>
38			Italy			<input checked="" type="checkbox"/>
39			Italy			<input checked="" type="checkbox"/>
40			Italy			<input checked="" type="checkbox"/>
41			Italy			<input checked="" type="checkbox"/>
42			United Kingdom			<input checked="" type="checkbox"/>
43			Italy			<input checked="" type="checkbox"/>
44			Italy			<input checked="" type="checkbox"/>
45			Italy			<input checked="" type="checkbox"/>
46			Cyprus			<input checked="" type="checkbox"/>
47			Switzerland			<input checked="" type="checkbox"/>




The menu (1) can be used to:

- Create new customers:** to create a new customer inserting the data required. It is possible to save or clean the page with the dedicated buttons. If the public flag is selected, the customer is visible and editable by all the users inside the same company.



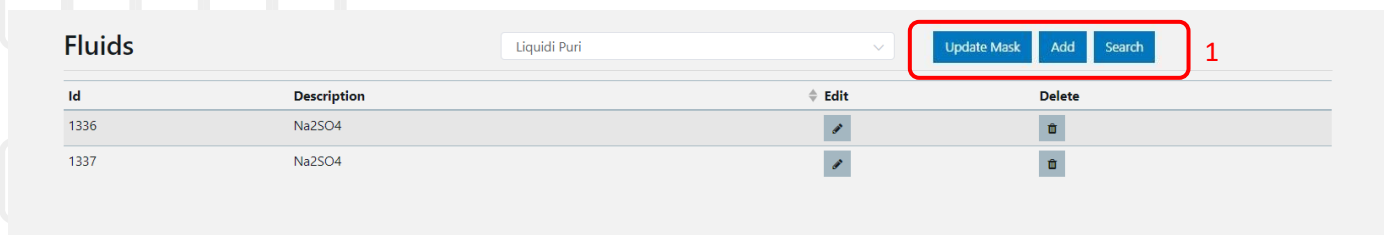
- b. Export customers: to create a .csv file with the list of the customers generated.
- c. Search customers: to search the customers setting the filters.

Each customer can be:

- Modified, duplicated or deleted if the user is the creator of the customer (   ).
- Only visualized if the user is not the creator of the customer (  ).

## 6. Fluid tools

From the left side menu, it is possible to open the “Fluid tool” page by clicking the dedicated button. In this page are shown all the fluids created by the users and it is possible to modify, delete or create them.



The menu (1) can be used to:

- a. Update mask: to refresh the visualization after modifications.
- b. Add: open the tools to create a new fluid. It is possible to add a fluid describing the behavior of the thermo-physical parameters by points.  
The required parameters are:

- Description: name of the fluid.
- Temp. Min/max: minimum and maximum allowed temperatures.
- Freezing temp.: freezing temperature of the fluid.
- Data type: type of data to insert (default: points).
- Present or not in favorites list.
- Dangerous (mandatory): G1 if dangerous, G2 if not.
- Vapor pressure > 0.5 bar temperature.
- Flash point temperature of the fluid.

On the right side, it is possible to describe the behavior of the fluid point by point, by setting thermo-physical properties at different temperatures. The fluid can then be saved by clicking the dedicated button.



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Fluid Save << Back

#### Details

Description ID: -1

Description:

File name:

Min temp (°C):

Max temp (°C):

Freezing temp (°C):

Data type: Points

In the list of favorites: Non

Dangerous (G1=yes; G2=no):

Vapour pressure > 0,5 bar temperature (°C):

Flash point temperature (°C):

#### Points

Item	Temperature [°C]	Density [kg/m <sup>3</sup> ]	Specific Heat [J/(kg K)]	Thermal Conductivity [W/(m K)]	Viscosity [Pa s]
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	0
11	0	0	0	0	0
12	0	0	0	0	0
13	0	0	0	0	0

Temperature: °C    Density: kg/m<sup>3</sup>    Specific Heat: J/(kg K)    Thermal Conductivity: W/(m K)    Viscosity: Pa s

c. Search: to search the fluid applying some filters.