

COACHVIEW

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1. INTRODUCTION

CoachView has been exclusively developed for SENSY COACH-II electronics. COACH-II is a specific datalogger, dedicated to hoisting equipment. It is an “add-on” to the load limitation system.

If your hoisting system is equipped with our load limitation devices, COACH-II has to be connected to the analogical output (0-10V or 4-20mA) of the load limiter, but it can also use analogical output from any other device providing the applied load information (PLC, ...).

CoachView main functions are:

- Creation and management of configuration files for COACH-II (capacity, set points, alarms).
- Analysis of the recordings performed by COACH-II.

Remark : File exchanges between COACH-II and CoachView are exclusively done by means of USB stick FAT32 formatted under Windows.

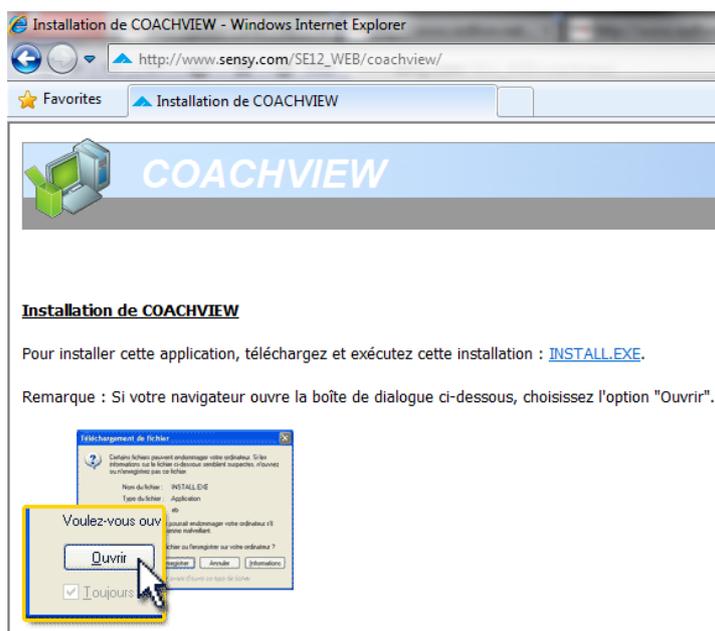
2. SOFTWARE DOWNLOAD

CoachView can either be installed via CD Rom or internet download. CD Rom is provided by SENSY upon request. URL for download: <http://www.sensy.net/ressources/>

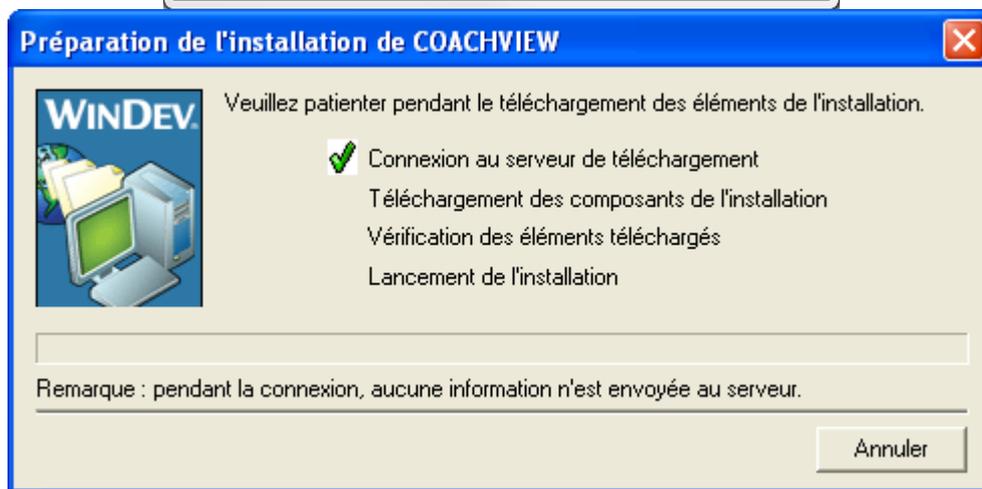
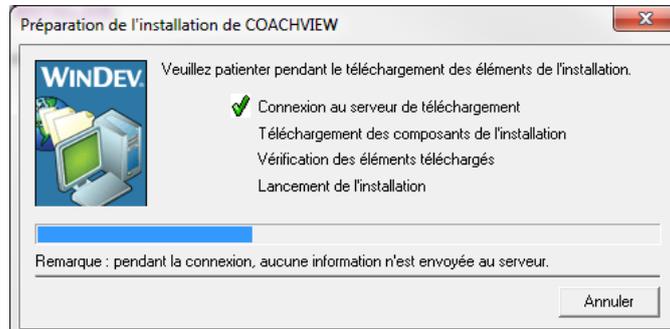
In order to guarantee having the latest software update, SENSY recommends internet download. This method ensures that each time you will start CoachView, the software will be automatically updated if a new version is available (as soon as the PC is connected to internet).

Remark : if you are facing issues during the first installation, please disable your anti-virus and firewall.

2.1. Internet download



Install wizard and install preparation download will start.



Install will automatically start.

2.2. CD Rom installation

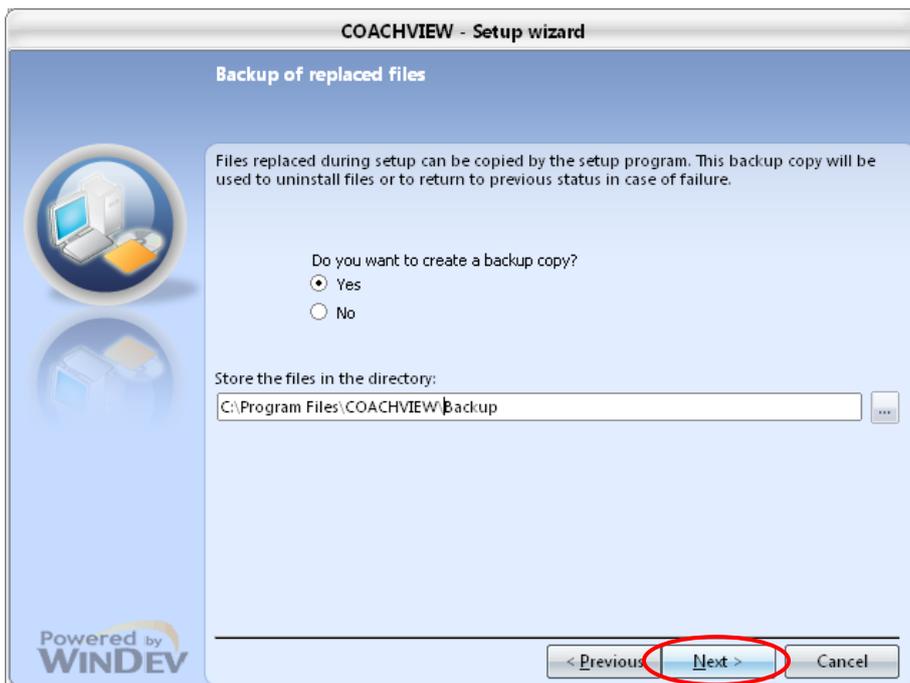
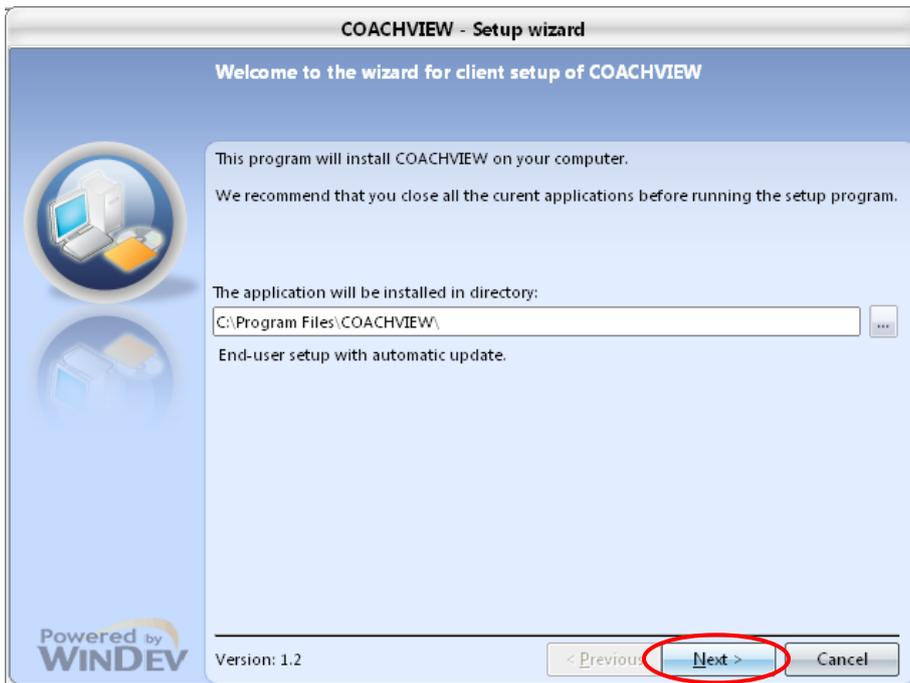
Place CD Rom in the tray, open it with file explorer and click on "Install.exe" file.

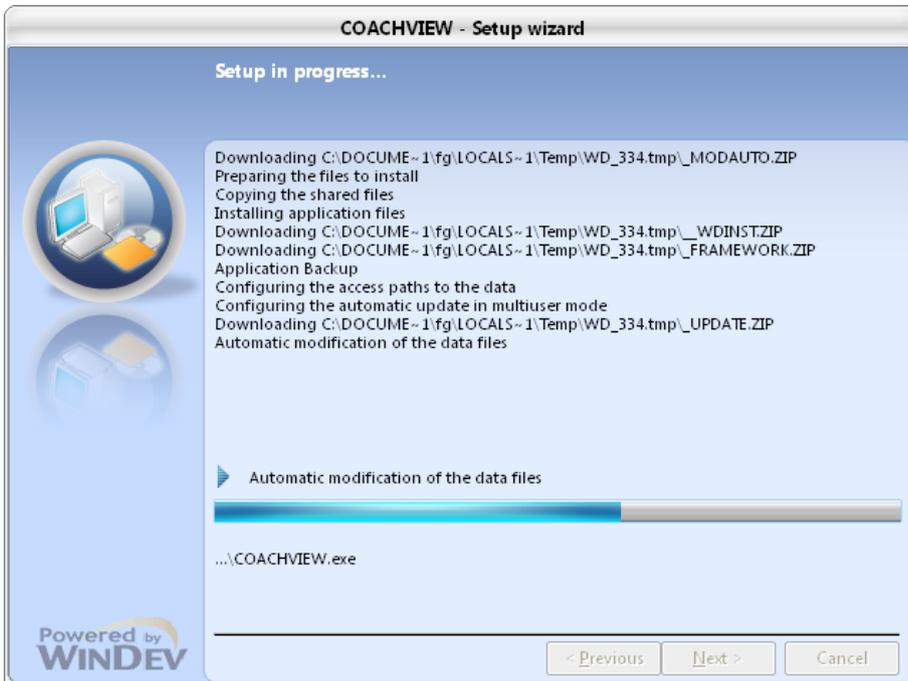
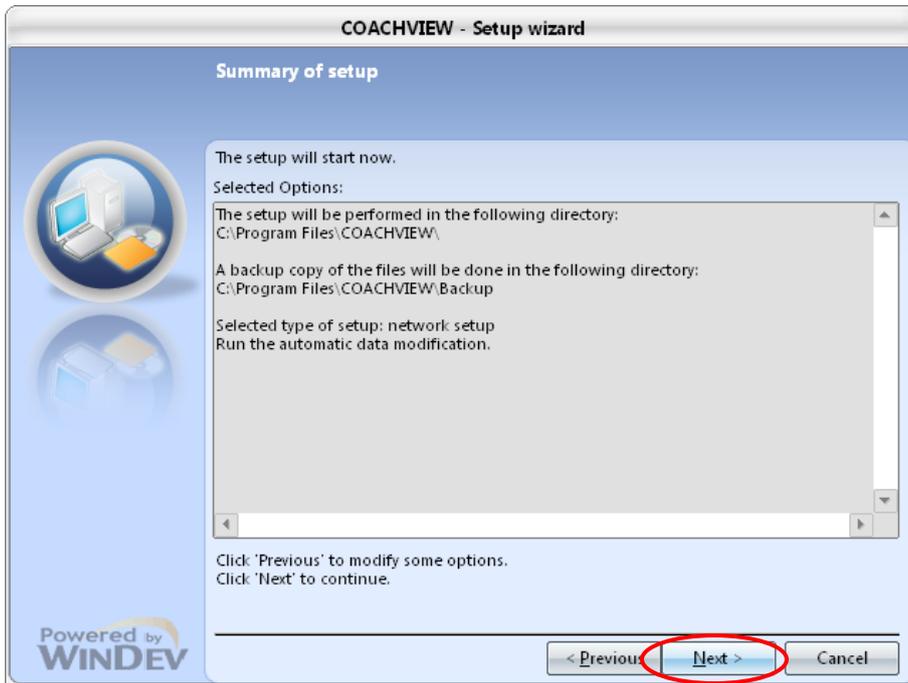
3. SOFTWARE INSTALLATION

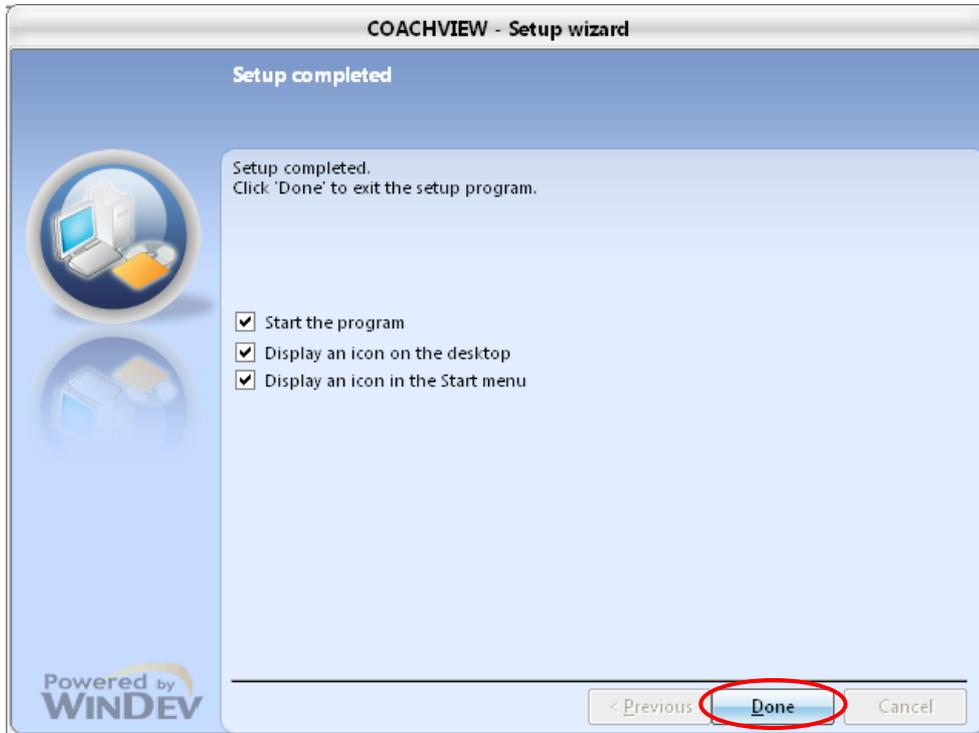
In both cases, the install wizard starts and guides you through following steps :



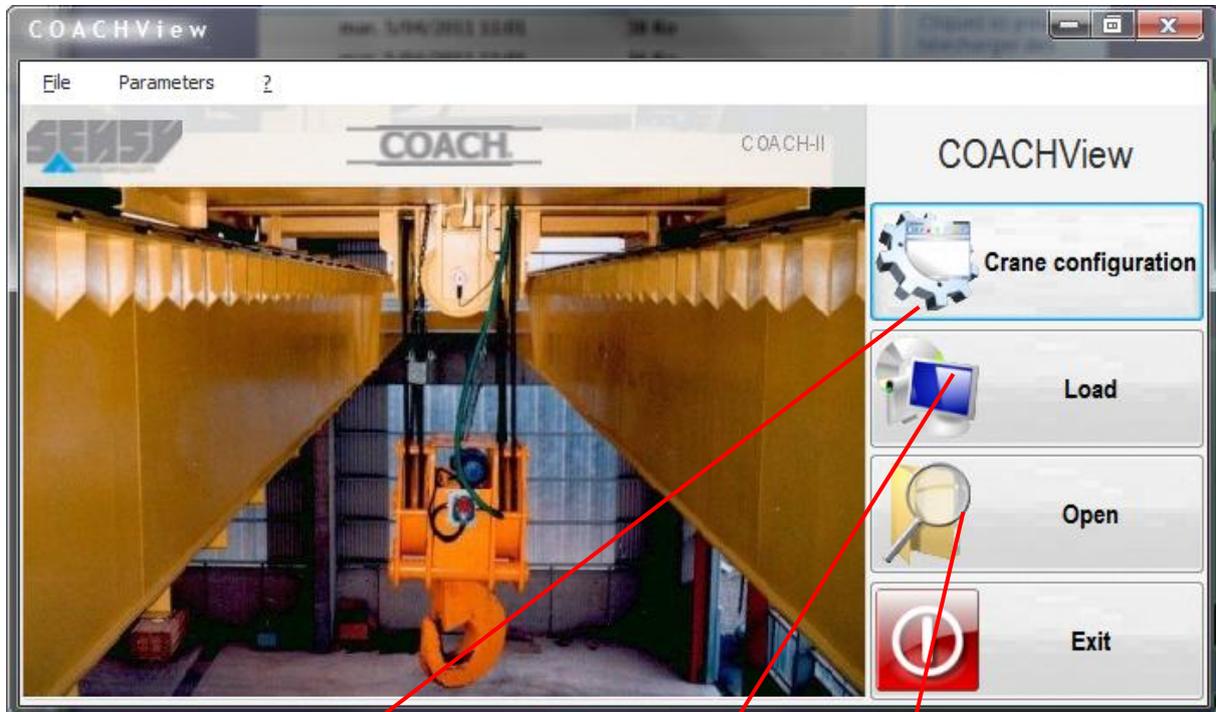
Choose installation language and follow instructions.







4. SOFTWARE – MAIN SCREEN



Configuration files
creation and management

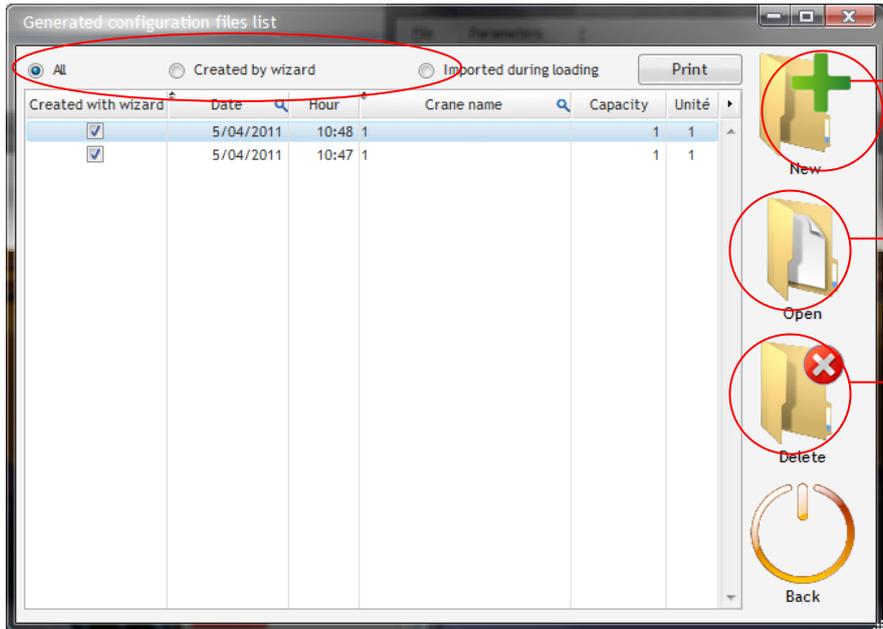
Loading path

List of available recordings

5. CONFIGURATION FILES MANAGEMENT

This screen shows all generated crane configurations and the ones memorized during data's Download (when COACH-II pre calibrated by SENSY).

For customers with extended crane park equipped with COACH-II, search filters are available here :



Creation of configuration file

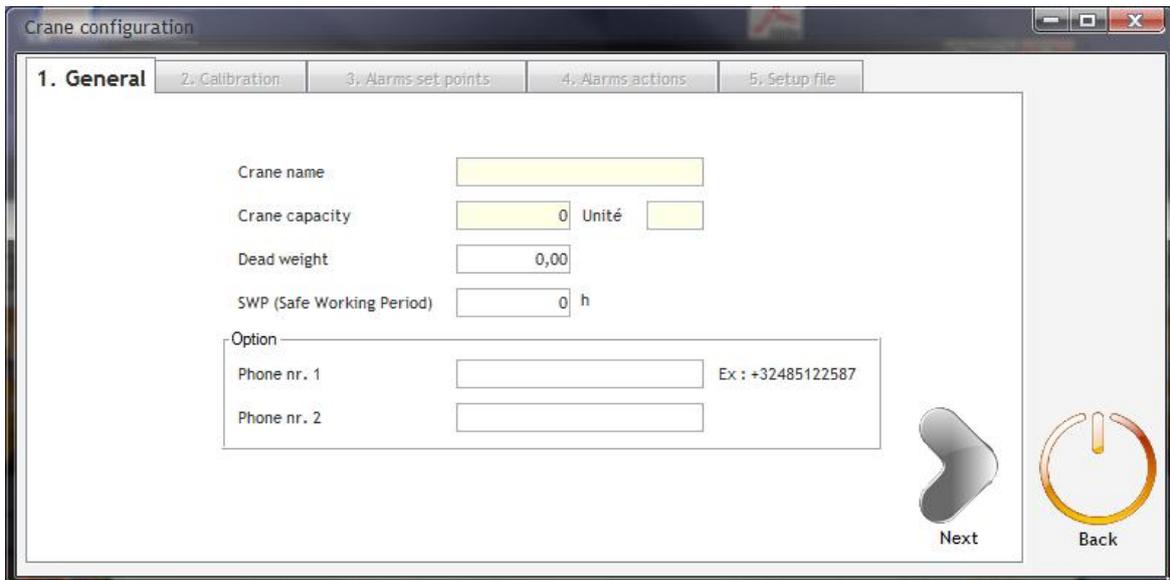
Opening a creation file

Suppression of configuration file

5.1. Configuration - File creation wizard

5.1.1. Button « New » > General page

Following fields are mandatory: Crane name, capacity, dead weight (can be 0) and Safe Working Period (SWP). Phone numbers fields are only applicable when GSM option has been purchased. Confirm setting by click on "Next".



Crane configuration

1. General 2. Calibration 3. Alarms set points 4. Alarms actions 5. Setup file

Crane name

Crane capacity 0 Unité

Dead weight 0,00

SWP (Safe Working Period) 0 h

Option

Phone nr. 1 Ex : +32485122587

Phone nr. 2

Next Back

5.1.2. Calibration page

This page is where you select the type of input signal and the corresponding loads.

Select input signal (V or mA).

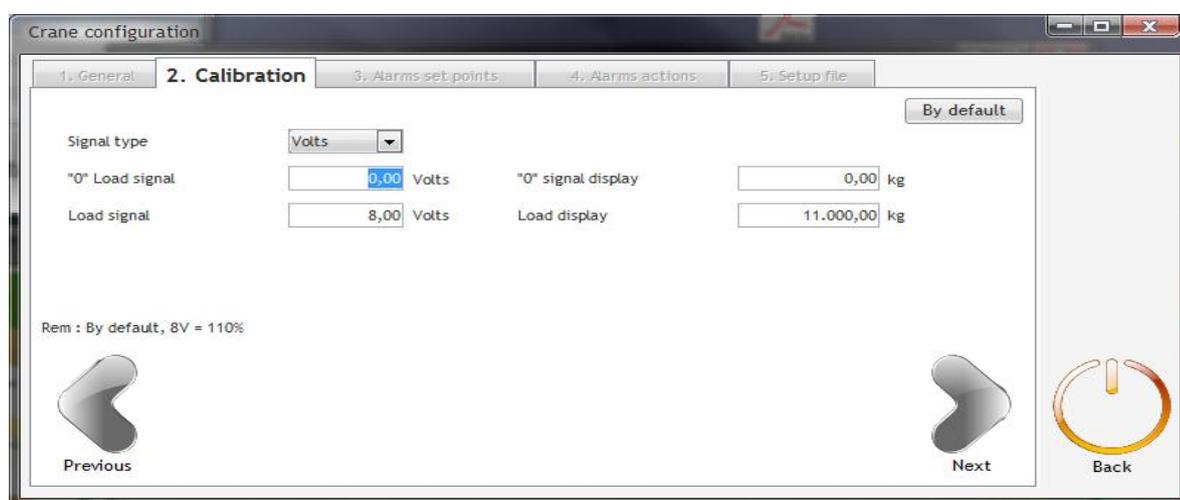
Input corresponding load values for related input signals

Default settings example: 0 V = 0 Kg = 0% 8 V = 11100 Kg = 110%

For 4-20mA input : 4mA = 0 kg = 0% 16.8mA = 11000 kg = 110%

These default values are automatically obtainable by a click on „By default“ button.

You could imagine setting 20mA for 300% for recording higher overloads



Attention: check COACH-II diagram for appropriate wiring !

5.1.3. Alarms set points page

B3 set point has a configurable counter, which determines how many times this value has to be crossed within one hour to trip this alarm.

B4 alarm is the average overload set point. This value is used for memorizing the hour/hour overload crossings.

B5 is the ultimate overload level. The first time this value is crossed, determined action will be generated.

Temperature alarms and hysteresis are also configurable.

Configurable SWP set point, determining what remaining time will trip SWP alarm.

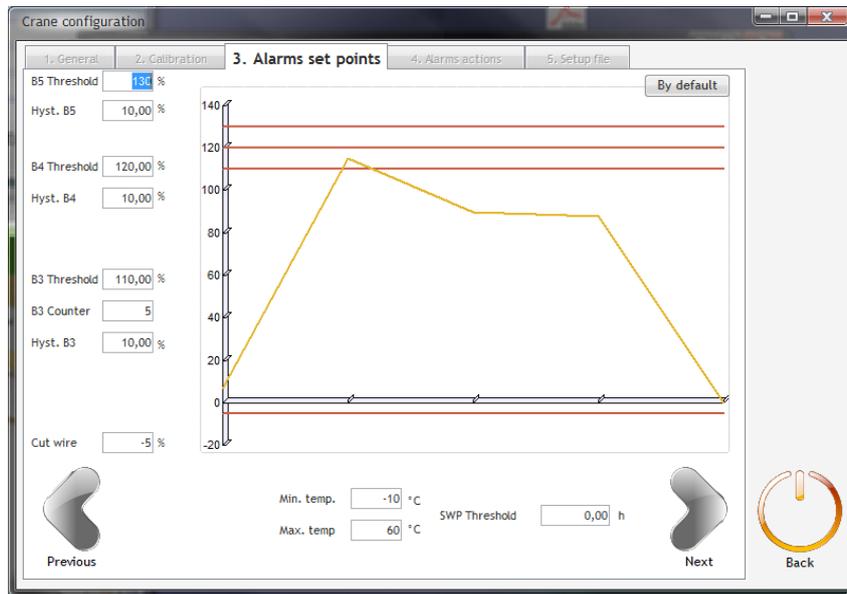
Example:

SWP is 10000 hours.

500 hours is set as SWP set point.

When 9500 operation hours will be crossed (500 hours remaining time), SWP alarm will trip.

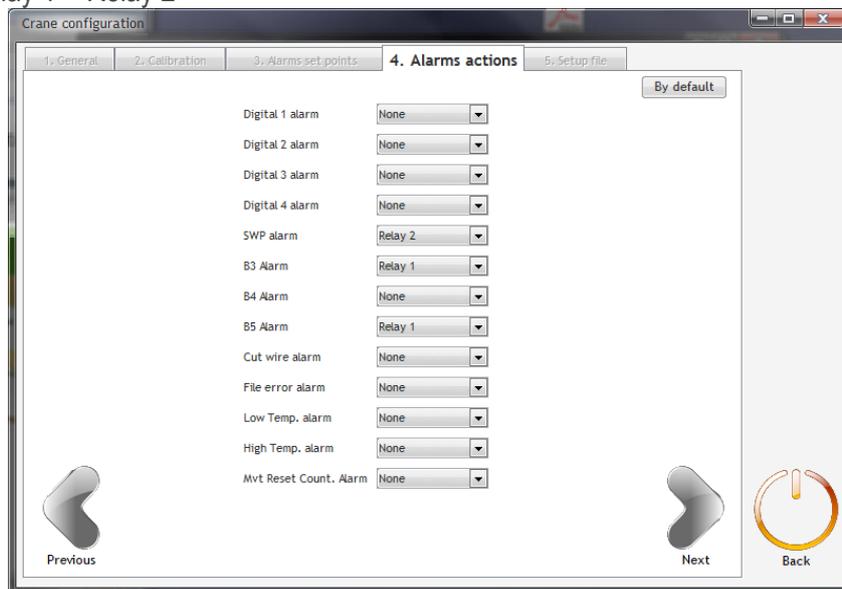
As SWP is taking the carried loads into account in its calculation, actual remaining time will be considered for the maintenance planning, instead of "arbitrary" periodic maintenance.



5.1.4. Alarms actions page

For each alarm, you will be required configuring an action.
 Following actions are available:

- None
- Relay 1
- SMS
- Relay 1 + SMS
- Relay 2
- Relay 1 + Relay 2
- Relay 2 + SMS
- SMS + Relay 1 + Relay 2



Crane configuration

1. General | 2. Calibration | 3. Alarms set points | **4. Alarms actions** | 5. Setup file

By default

Digital 1 alarm	None
Digital 2 alarm	None
Digital 3 alarm	None
Digital 4 alarm	None
SWP alarm	Relay 2
B3 Alarm	Relay 1
B4 Alarm	None
B5 Alarm	Relay 1
Cut wire alarm	None
File error alarm	None
Low Temp. alarm	None
High Temp. alarm	None
Mvt Reset Count. Alarm	None

Previous | Next | Back

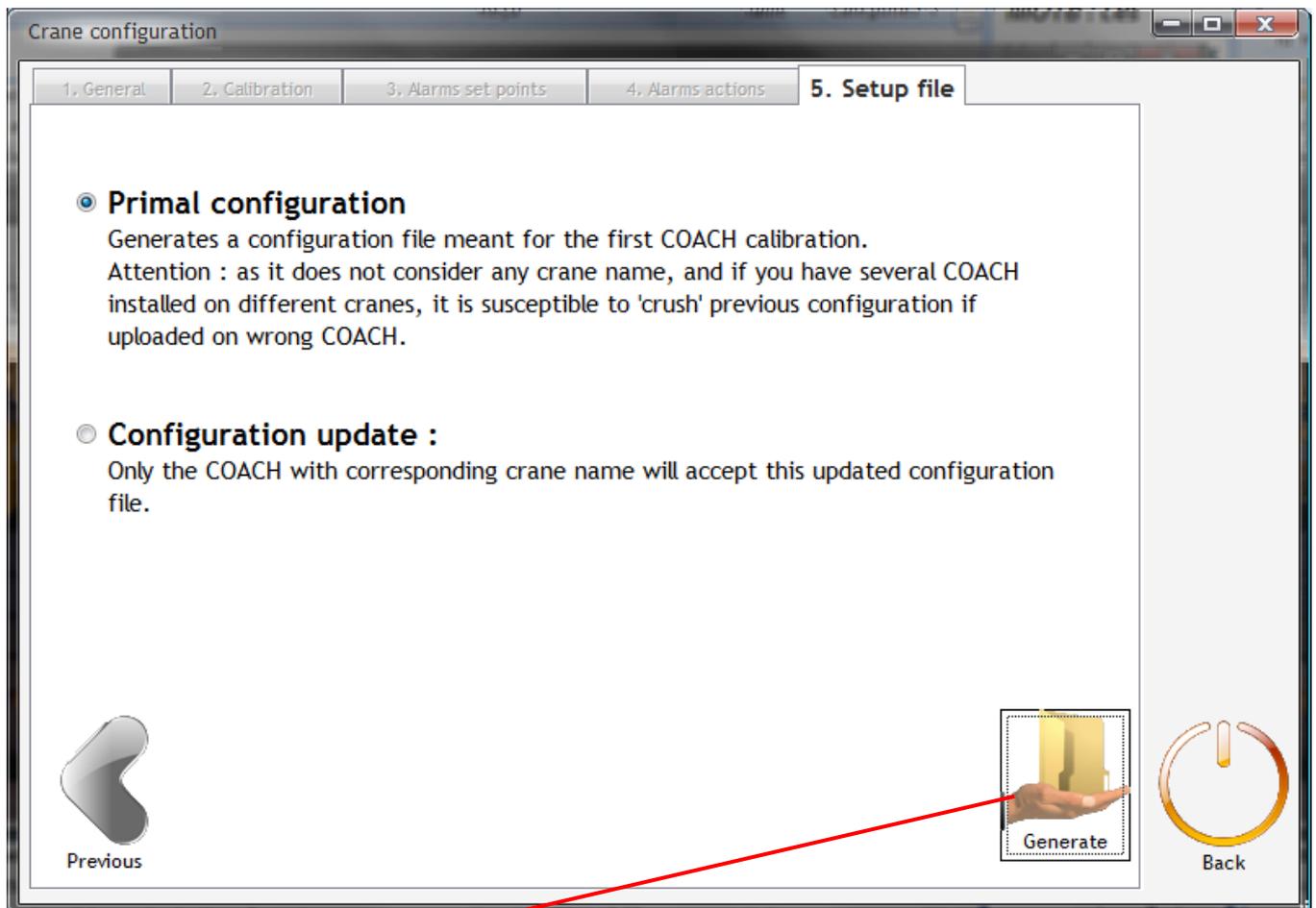
Remark: 2 types of alarms exist, automatically or manually solved.

When automatically solved alarm trips, the related action occurs but as soon as the alarm disappears, the related action is automatically canceled.

Alarm with manual solving will initiate the programmed action, but when the alarm disappears, the related action remains and must be manually reset through the "Alarm reset" button.

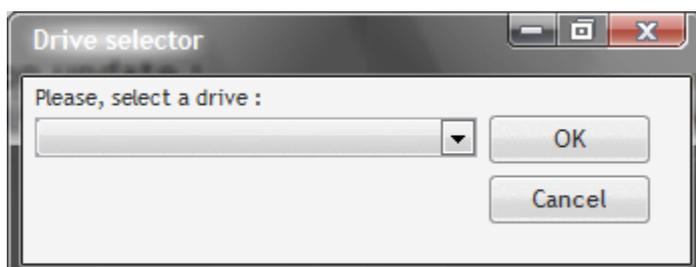
5.1.5. Generating a configuration file

From this page, you will choose the type of generation.



Click on « Generate »

A selection box will appear – select the USB stick meant for COACH-II Uploads and downloads.



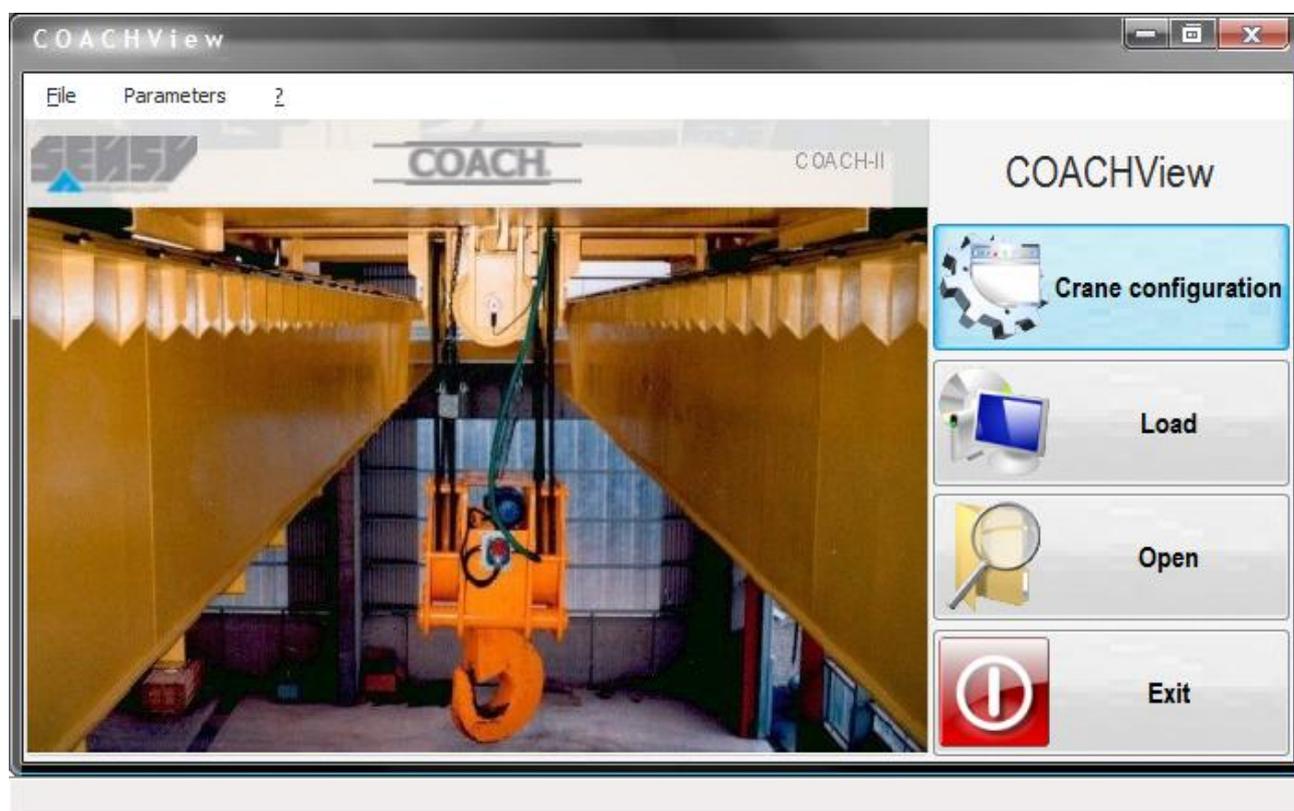
When operation successfully completed, you will be able to print the calibration sheet.

Remark: the configuration is saved on: Chosen drive (USB stick)\DATA\UPLOAD\“ALL” or “Crane name”

6. MEASUREMENT ANALYSIS

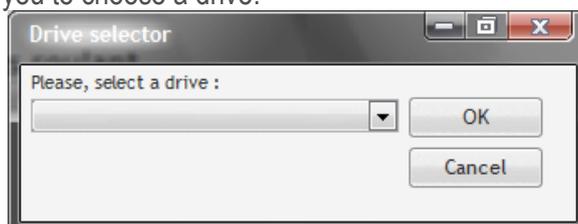
The COACHView analysis tools can be accessed using the button “Load” and “Open”.
 You must use the “Load” button when you want to analyze data that you have not saved.
 The “Open” button is used to select an analysis for loading that you have already saved.

Note: to load COACH data from a USB stick, please refer to the COACH manual. Note however that the data can be found in text format in the following subdirectory structure: ‘DATA\DOWNLOAD\ “Name of gantry + Date + time” ‘



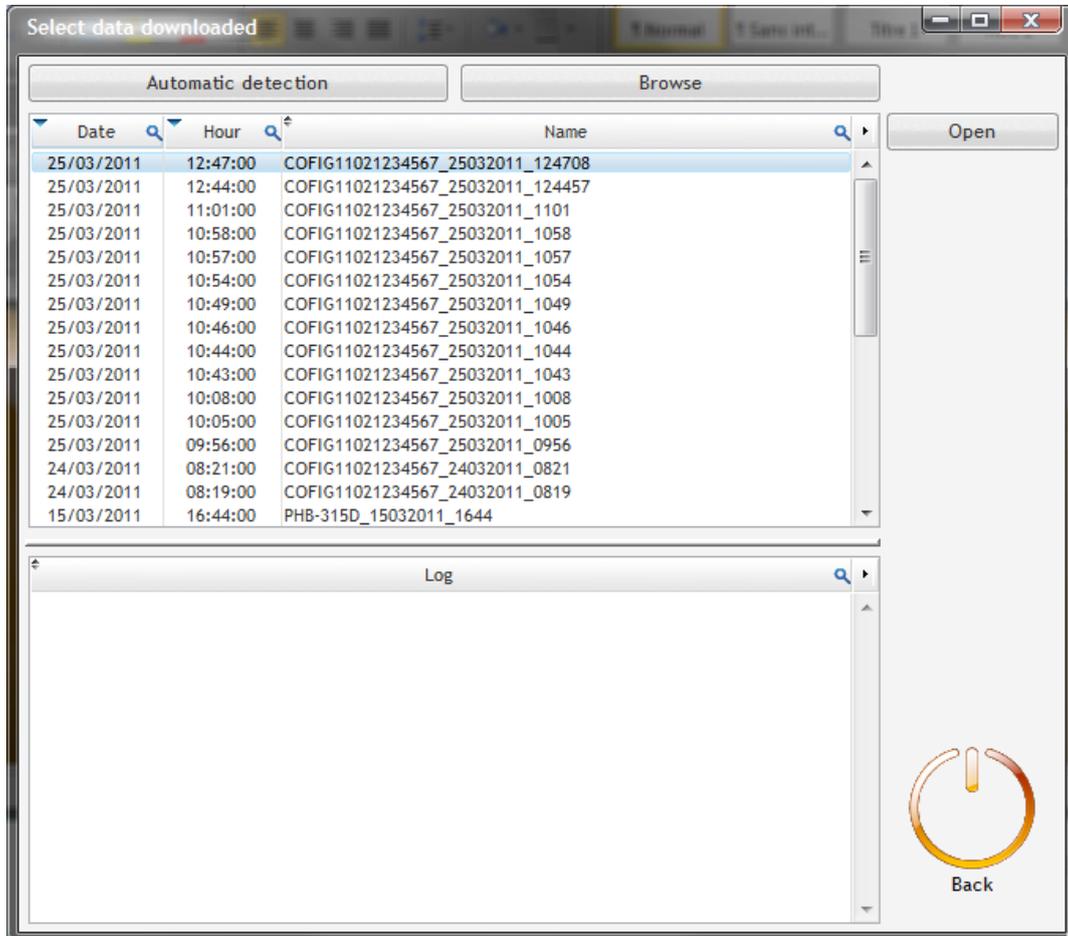
6.1. Loading the data

The program starts by asking you to choose a drive.



Choose the USB stick drive and click on “OK”.

COACHView will scan the data on the drive selected and display all the loads available, like the following:

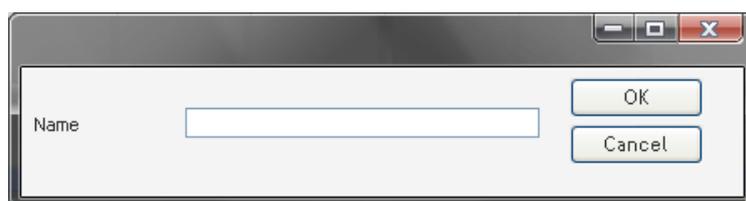


All you have to do then is choose the load you require and click on “Open”.

Note: The “Browse” button allows you to search for data files manually.

Then, COACHView will actually start processing the data **which can take several minutes** depending on the amount of data, and displays the analysis window.

So that you do not have to repeat the loading and processing steps, which can take a fair amount of time, we recommend you save your analysis by pressing the “Save” button in the analysis window.



You can then rename the saved file.

If all goes well, you will see a confirmation.

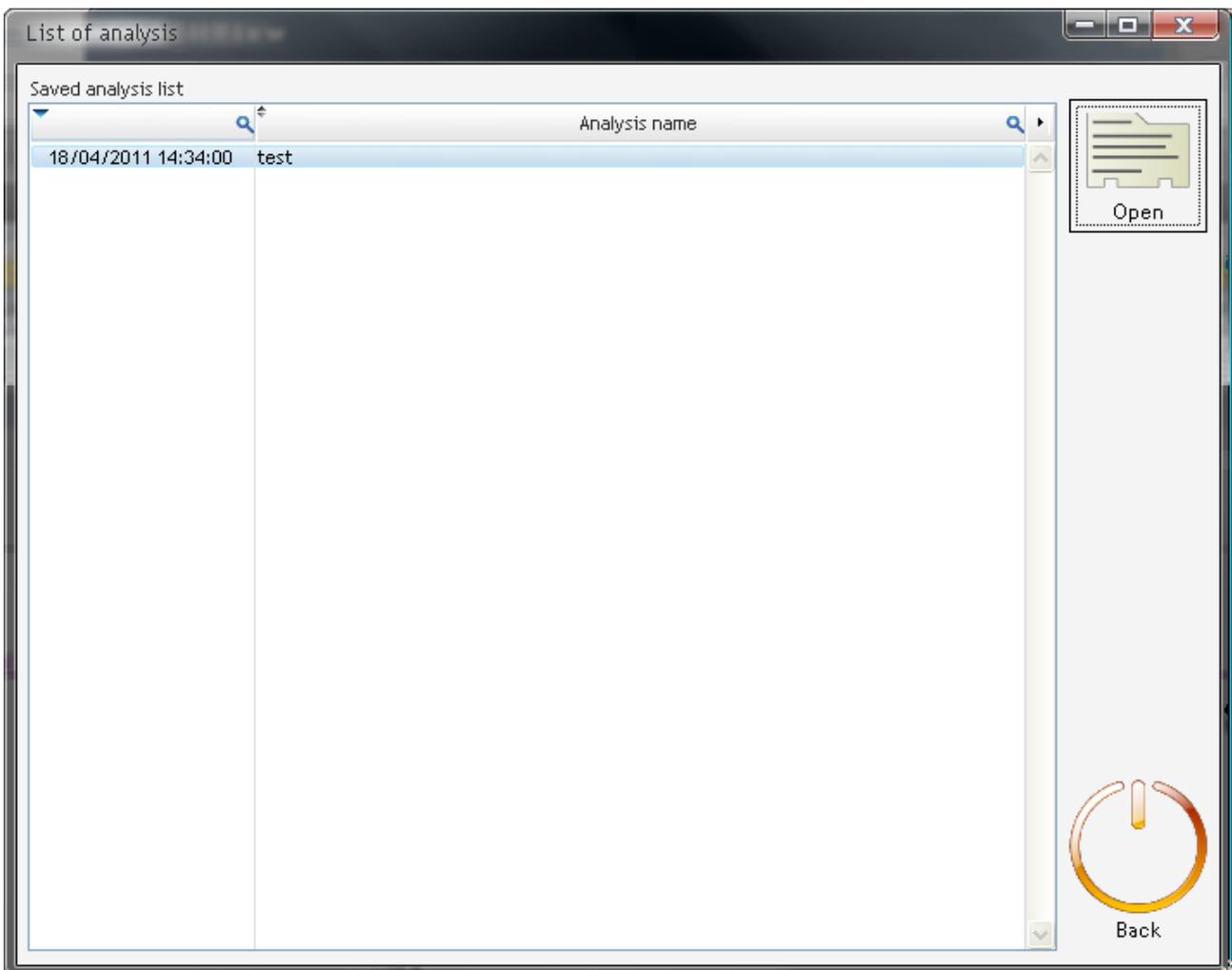


6.2 Opening a saved analysis

From the main screen, click on 'Open' and you will see the following screen.

This is in fact a list of all the saved files sorted in decreasing date/time order.

Then all you have to do is select a file and click on 'Open' to display the analysis window.



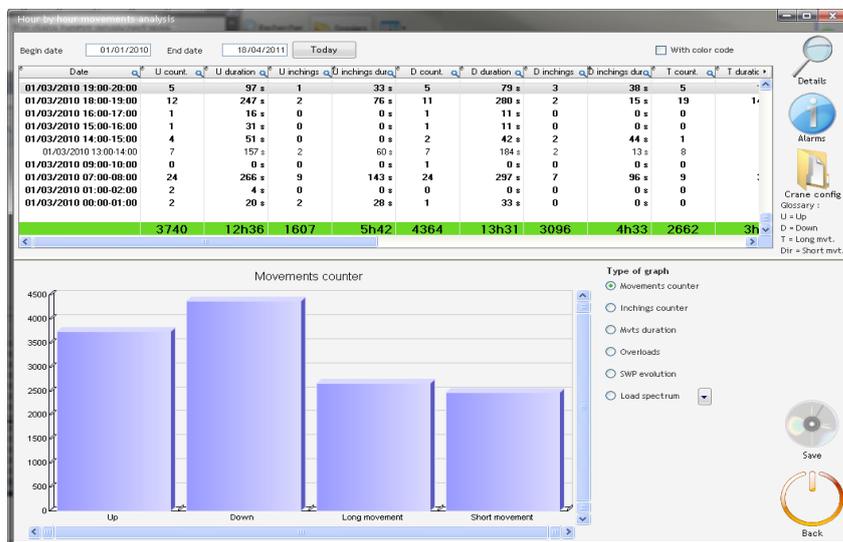
6.2 The analysis tool

This window consists of two main zones.

- The upper zone is a table where each row represents a period of an hour during which movements were detected.
Note: This table can be filtered by date.
- The lower zone contains several views created from the information displayed in the table above.
Note: the graphics generated are also directly dependent on the date filter.

Other functions are also available in this page:

- The ability to zoom and also visualize all the movements in the selected hour
- Access to all the alarms
- Display of the application configuration file at the moment when the data being analyzed was loaded.



Zoom the selected time

Alarm Analysis

Choose the different types of graphic

Save the data

Return to the previous screen

Search by date or in the date in progress

Display the number of movements, "piano" movements, alarms and the duration during one hour

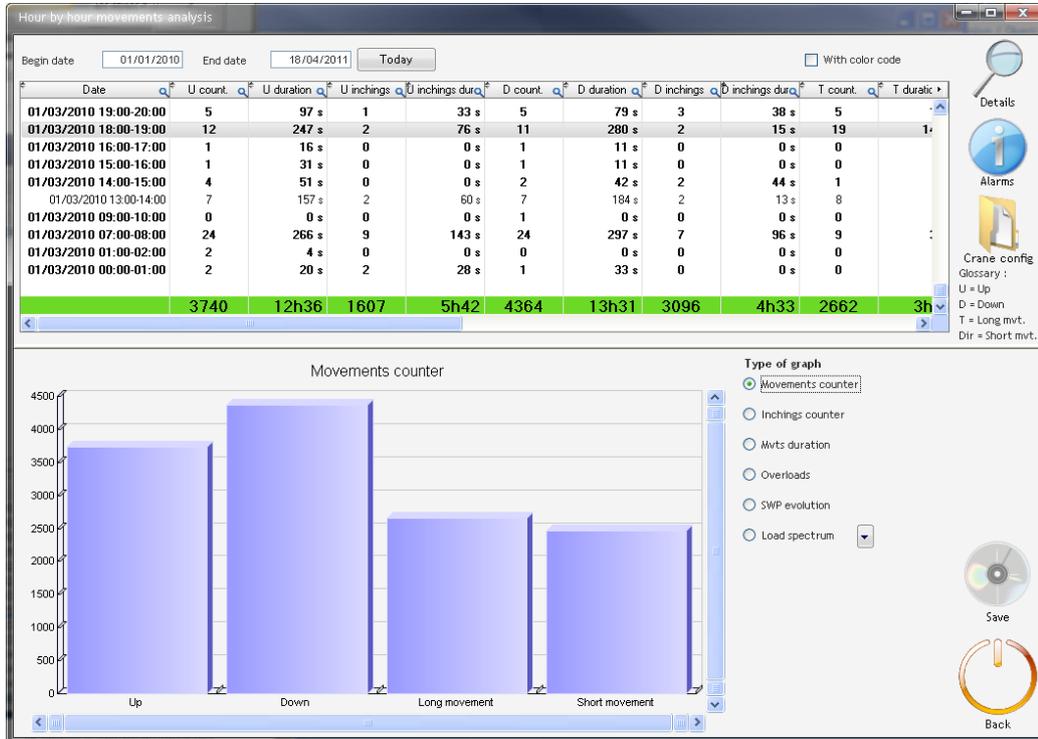
Date	U count	U duration	U inchings	D count	D duration	D inchings	T count	T duration
01/03/2010 19:00-20:00	5	97 s	1	33 s	5	79 s	3	38 s
01/03/2010 18:00-19:00	12	247 s	2	76 s	11	280 s	2	15 s
01/03/2010 16:00-17:00	1	16 s	0	0 s	1	11 s	0	0 s
01/03/2010 15:00-16:00	1	31 s	0	0 s	1	11 s	0	0 s
01/03/2010 14:00-15:00	4	51 s	0	0 s	2	42 s	2	44 s
01/03/2010 13:00-14:00	7	157 s	2	60 s	7	184 s	2	13 s
01/03/2010 09:00-10:00	0	0 s	0	0 s	1	0 s	0	0 s
01/03/2010 07:00-08:00	24	266 s	9	143 s	24	297 s	7	96 s
	2	4 s	0	0 s	0	0 s	0	0 s
	2	20 s	2	28 s	1	33 s	0	0 s
	3740	12h36	1607	5h42	4364	13h31	3096	4h33
							2662	3h

Display the total of the various counters

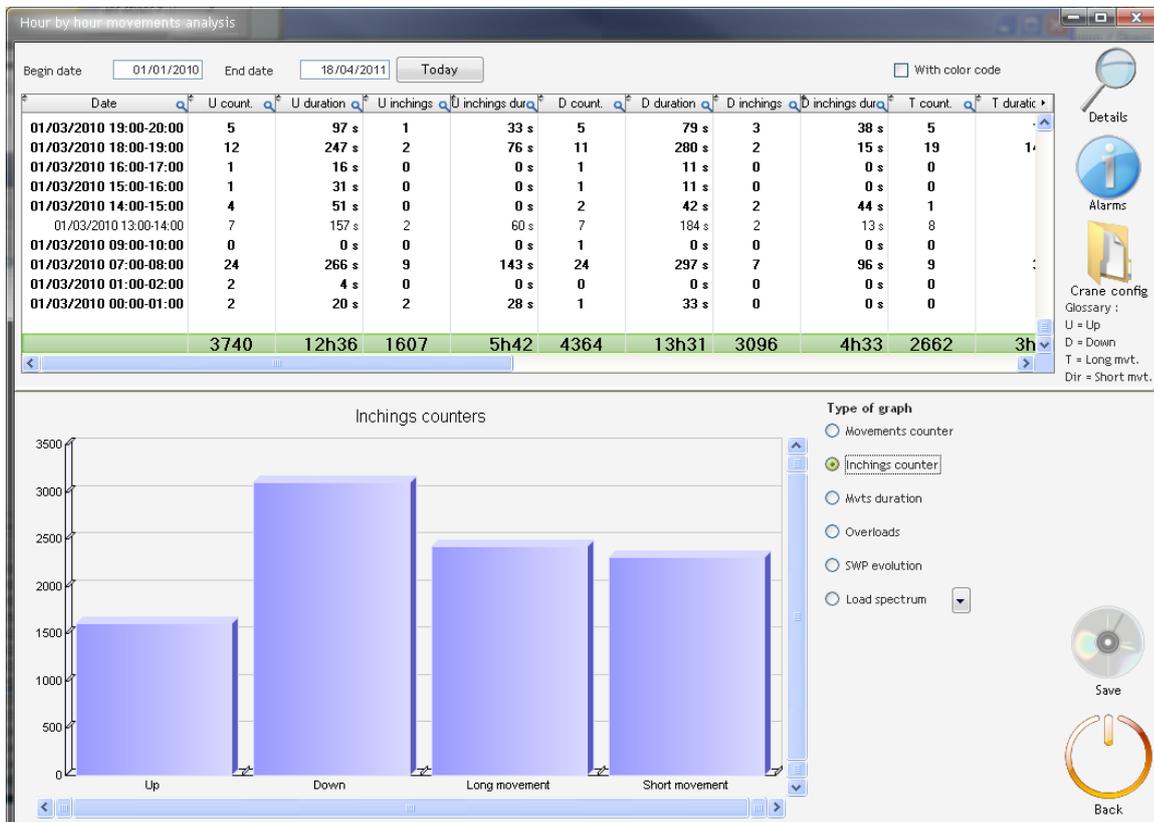
Note: if a line is displayed in bold this means that there was at least one type B4 alarm = general overload during this hour.

6.2.1 Types of graphics

6.1.1. Movement counters



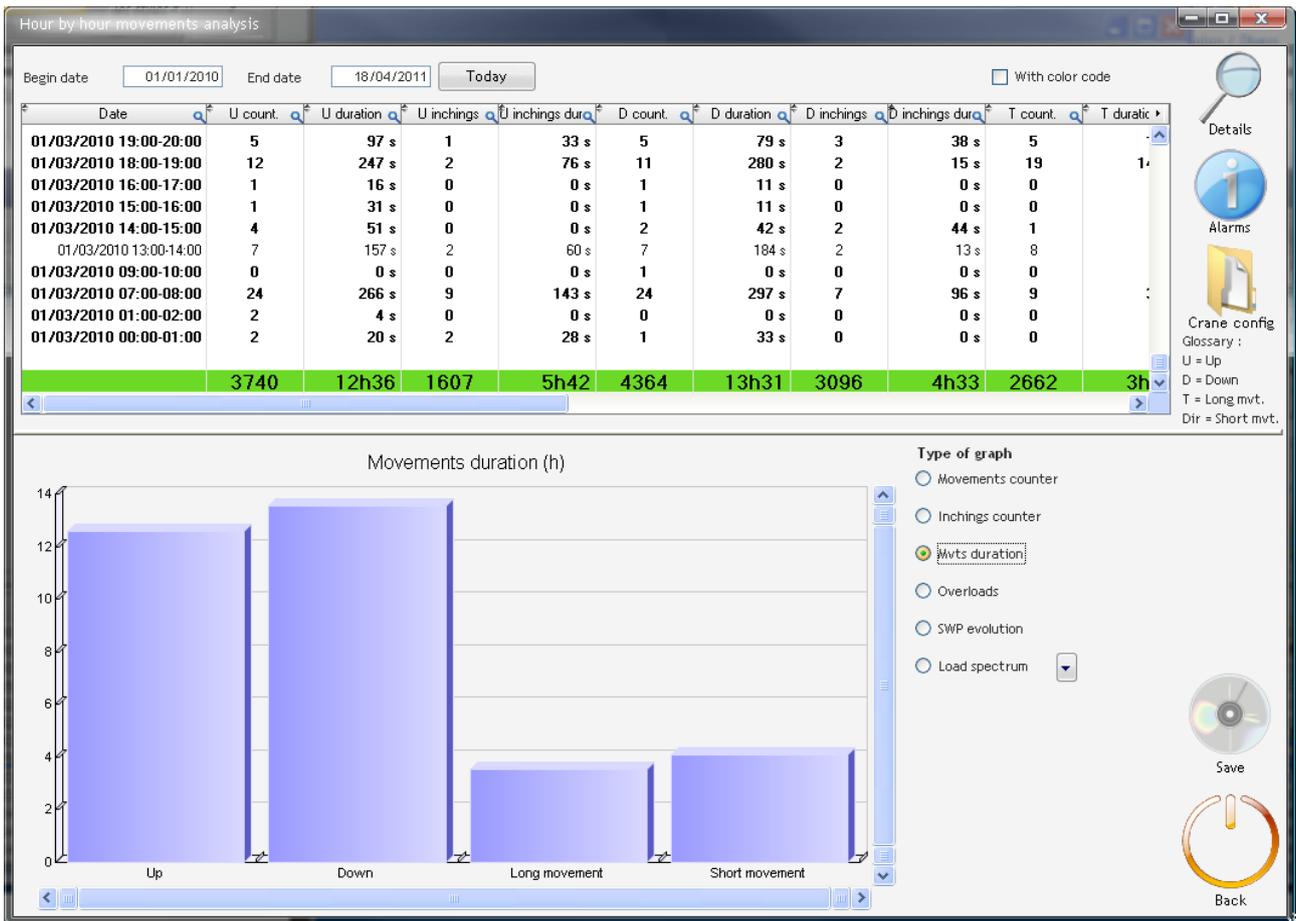
6.1.2. "Piano" movement counters



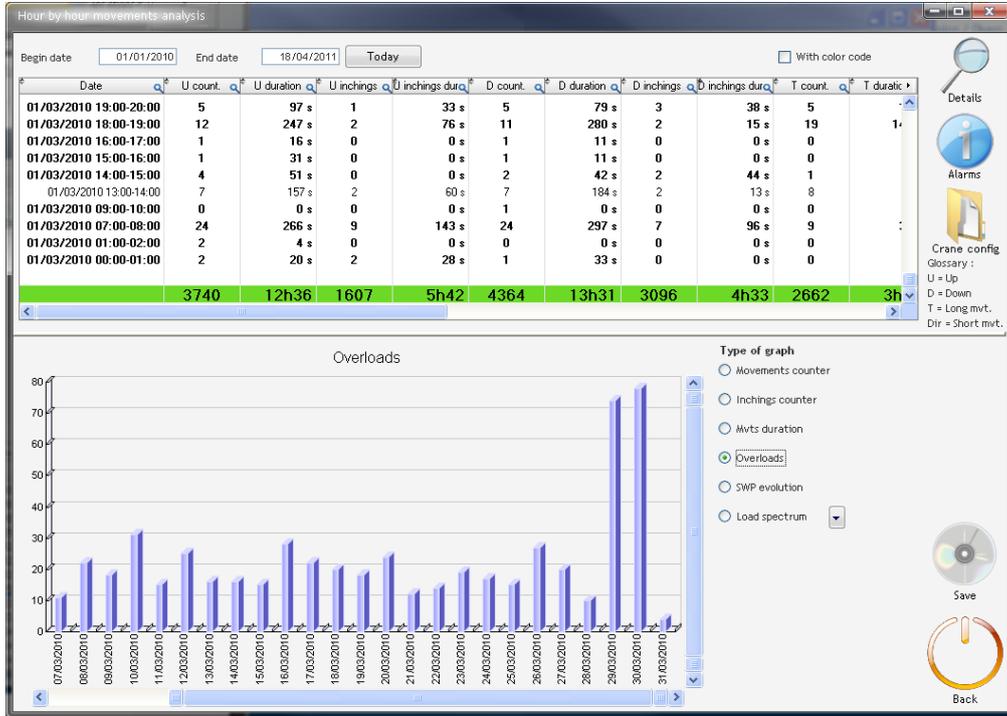
Note: a “piano” movement = 2 consecutive identical movements with a time interval between the 2 movements of less than 2 seconds
 Note: more detail is given in the Coach manual).

6.1.3. Duration of the movements

Proportional display of the duration of each movement. (up, down, translation, direction)

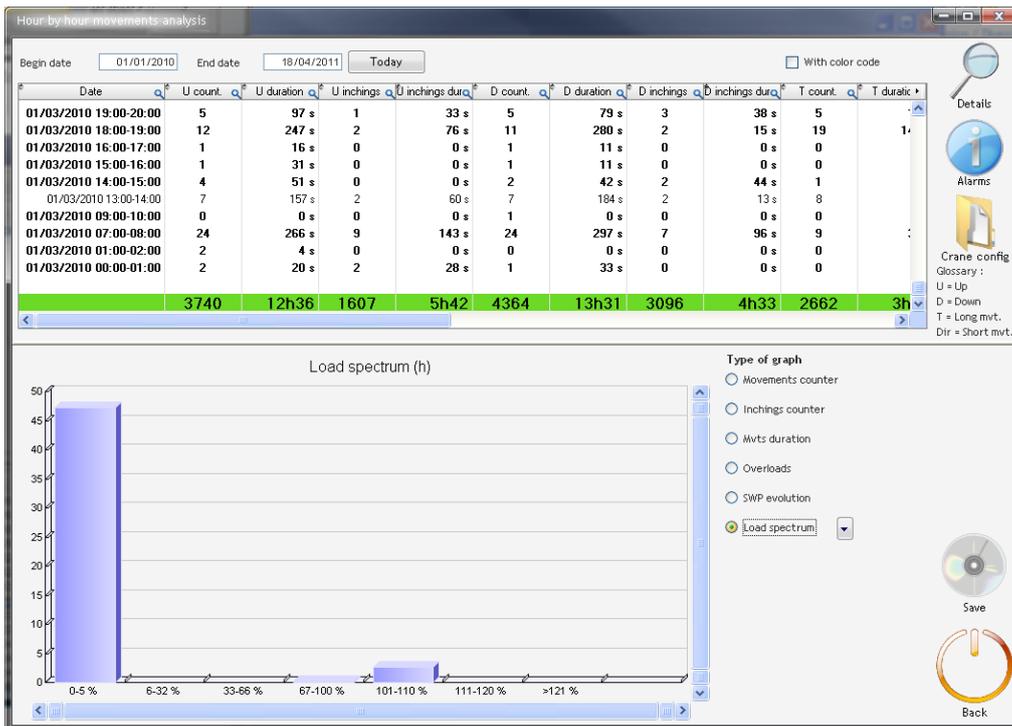


6.1.4. Display of the overload number during the time



6.2.1.1 Load spectrum

Graphical display of the load usage of the gantry



The load levels can be parameterized by clicking on the following arrow:



6.3 Zoom function

It is possible to zoom in on the last 30 days of gantry usage. That means display in detail all the movements it has made. To do this, choose a row (an hour) and double-click it or click on the icon

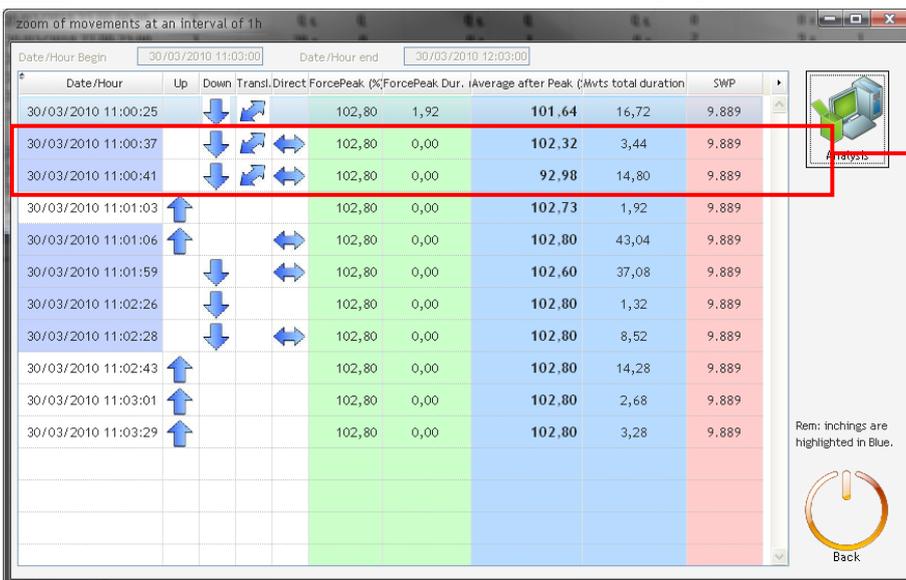


27/01/2010 07:00:00	16	11	7	15	64	38	25	62	18	9	9	10	11	16	19	15	0	0
27/01/2010 08:00:00	10	11	17	16	22	26	42	53	18	17	25	14	14	2	17	10	0	0
27/01/2010 09:00:00	8	6	5	4	37	8	5	6	13	13	14	14	14	15	14	14	0	0
27/01/2010 10:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27/01/2010 15:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27/01/2010 16:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28/01/2010 09:00:00	5	5	8	5	7	16	9	14	3	3	13	9	2	6	5	9	0	0
28/01/2010 10:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28/01/2010 11:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28/01/2010 13:00:00	8	4	9	6	44	13	16	17	13	13	13	13	30	38	45	42	0	0

A new window will be displayed with the following parameters:

- The date + time of the movement.
- The type of movement (lift, lower, translation, direction).
- The peak force + moment of occurrence.
- The average of the signal + the total duration of the movement.
- The value of the SWP

Note: if there was a 'piano' movement, the row will be highlighted in blue.



zoom of movements at an interval of 1h

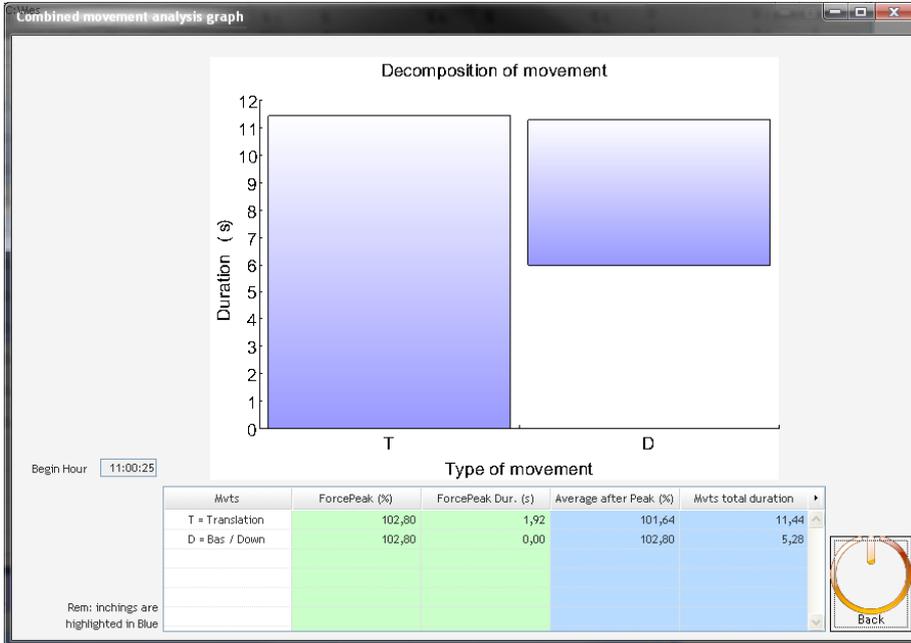
Date/Hour Begin: 30/03/2010 11:03:00 Date/Hour end: 30/03/2010 12:03:00

Date/Hour	Up	Down	Transl. Direct	ForcePeak (%)	ForcePeak Dur.	Average after Peak (%Wvts total duration)	SWP
30/03/2010 11:00:25	↓	↓		102,80	1,92	101,64	16,72
30/03/2010 11:00:37	↓	↓	↔	102,80	0,00	102,32	3,44
30/03/2010 11:00:41	↓	↓	↔	102,80	0,00	92,98	14,80
30/03/2010 11:01:03	↑			102,80	0,00	102,73	1,92
30/03/2010 11:01:06	↑		↔	102,80	0,00	102,80	43,04
30/03/2010 11:01:59		↓	↔	102,80	0,00	102,60	37,08
30/03/2010 11:02:26		↓		102,80	0,00	102,80	1,32
30/03/2010 11:02:28		↓	↔	102,80	0,00	102,80	8,52
30/03/2010 11:02:43	↑			102,80	0,00	102,80	14,28
30/03/2010 11:03:01	↑			102,80	0,00	102,80	2,68
30/03/2010 11:03:29	↑			102,80	0,00	102,80	3,28

Rem: inchings are highlighted in Blue.

Back

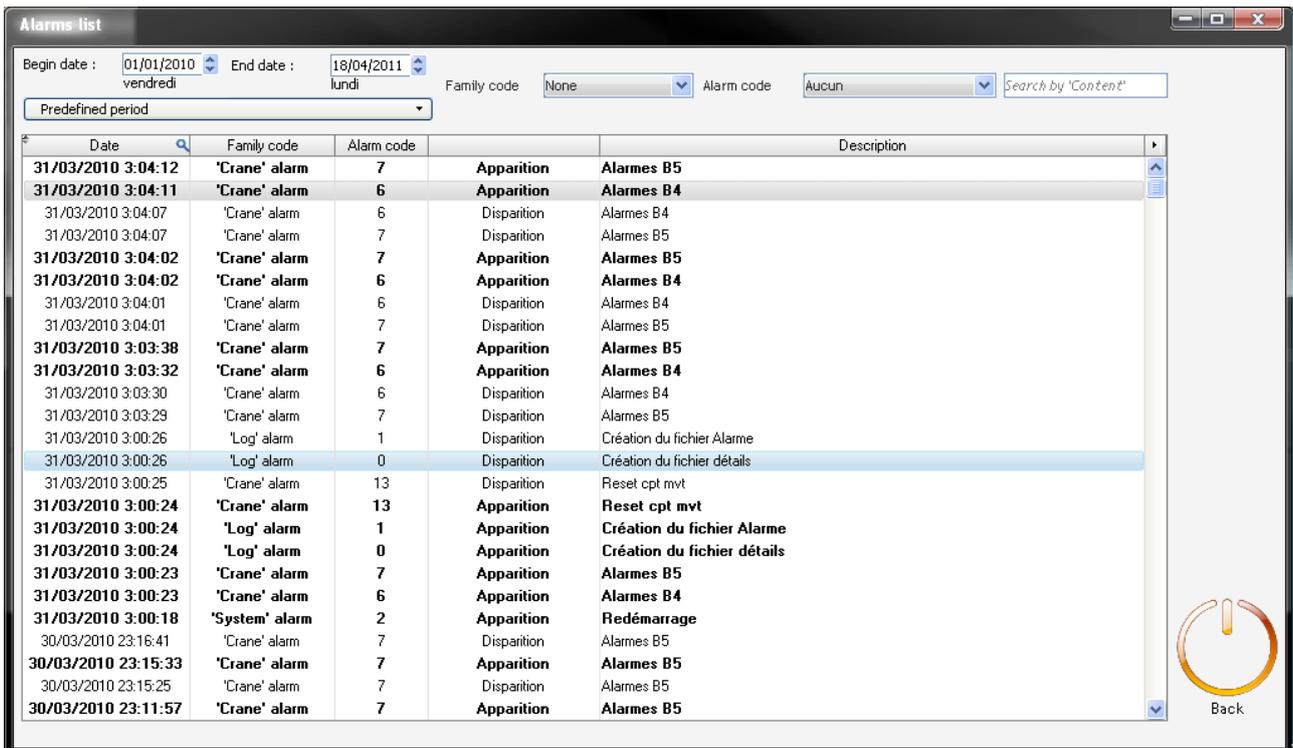
It is possible to break the movement down further. This function is interesting for a composite movement. To do this, select the movement and double-click it or select the movement and click on the icon



7 HANDLING ALARMS



By clicking on the 'Alarms' button on the analysis page you can access the following page:



Alarms list

Begin date : 01/01/2010 vendredi End date : 18/04/2011 lundi

Family code: None Alarm code: Aucun Search by 'Content'

Date	Family code	Alarm code	Description
31/03/2010 3:04:12	'Crane' alarm	7	Apparition Alarmes B5
31/03/2010 3:04:11	'Crane' alarm	6	Apparition Alarmes B4
31/03/2010 3:04:07	'Crane' alarm	6	Disparition Alarmes B4
31/03/2010 3:04:07	'Crane' alarm	7	Disparition Alarmes B5
31/03/2010 3:04:02	'Crane' alarm	7	Apparition Alarmes B5
31/03/2010 3:04:02	'Crane' alarm	6	Apparition Alarmes B4
31/03/2010 3:04:01	'Crane' alarm	6	Disparition Alarmes B4
31/03/2010 3:04:01	'Crane' alarm	7	Disparition Alarmes B5
31/03/2010 3:03:38	'Crane' alarm	7	Apparition Alarmes B5
31/03/2010 3:03:32	'Crane' alarm	6	Apparition Alarmes B4
31/03/2010 3:03:30	'Crane' alarm	6	Disparition Alarmes B4
31/03/2010 3:03:29	'Crane' alarm	7	Disparition Alarmes B5
31/03/2010 3:00:26	'Log' alarm	1	Disparition Création du fichier Alarme
31/03/2010 3:00:26	'Log' alarm	0	Disparition Création du fichier détails
31/03/2010 3:00:25	'Crane' alarm	13	Disparition Reset cpt mvt
31/03/2010 3:00:24	'Crane' alarm	13	Apparition Reset cpt mvt
31/03/2010 3:00:24	'Log' alarm	1	Apparition Création du fichier Alarme
31/03/2010 3:00:24	'Log' alarm	0	Apparition Création du fichier détails
31/03/2010 3:00:23	'Crane' alarm	7	Apparition Alarmes B5
31/03/2010 3:00:23	'Crane' alarm	6	Apparition Alarmes B4
31/03/2010 3:00:18	'System' alarm	2	Apparition Redémarrage
30/03/2010 23:16:41	'Crane' alarm	7	Disparition Alarmes B5
30/03/2010 23:15:33	'Crane' alarm	7	Apparition Alarmes B5
30/03/2010 23:15:25	'Crane' alarm	7	Disparition Alarmes B5
30/03/2010 23:11:57	'Crane' alarm	7	Apparition Alarmes B5

Back

This contains the list of alarms detected by Coach as well as the actions triggered, sorted in descending date order.

The following filters are available:

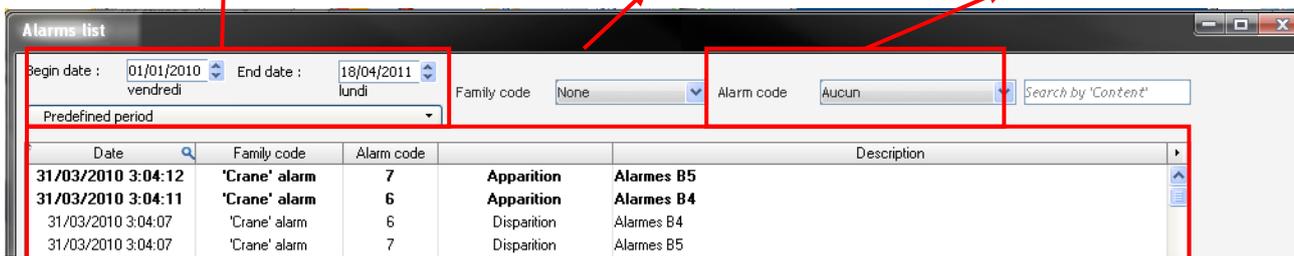
- Date
- Family code ('système', 'pont', 'trace' (system, gantry, track) history)
- Alarm code

Note: the alarm codes are different according to the family code selected.

Filter by date or a specific period

Filter by Family Code

Filter by Alarm Code



The screenshot shows the 'Alarms list' window with the following filters highlighted by red boxes:

- Filter by date or a specific period:** The 'Begin date' (01/01/2010) and 'End date' (18/04/2011) fields, along with the 'Predefined period' dropdown.
- Filter by Family Code:** The 'Family code' dropdown menu, currently set to 'None'.
- Filter by Alarm Code:** The 'Alarm code' dropdown menu, currently set to 'Aucun'.

The table below shows the filtered results:

Date	Family code	Alarm code	Description
31/03/2010 3:04:12	'Crane' alarm	7	Apparition Alarmes B5
31/03/2010 3:04:11	'Crane' alarm	6	Apparition Alarmes B4
31/03/2010 3:04:07	'Crane' alarm	6	Disparition Alarmes B4
31/03/2010 3:04:07	'Crane' alarm	7	Disparition Alarmes B5