

Operating Instructions

Tankvision Professional NXA85 Movements System Configuration



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1 Movements Configuration Introduction

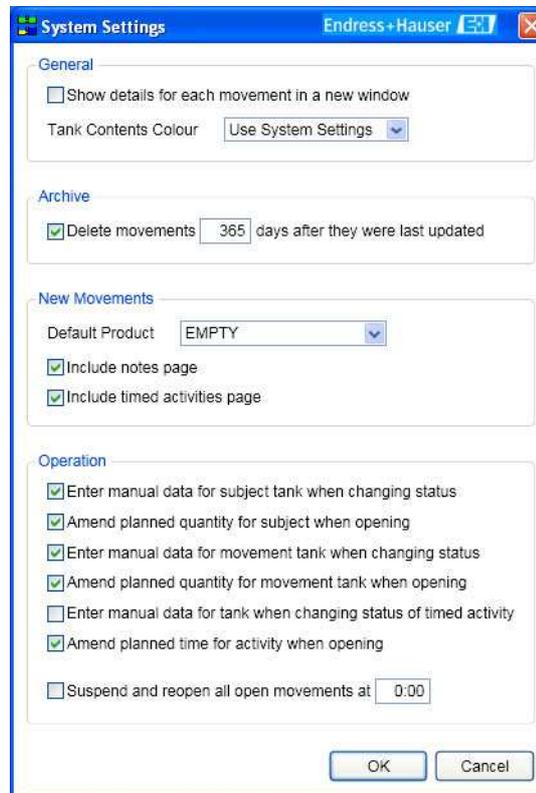
Tankvision Professional is a reliable and scalable tank inventory management application suited for small terminals and depots to large refineries.

The movements system within Tankvision Professional is used to plan, open, suspend and close movements.

This manual is designed as an administrators aid to configuring the software.

2 System Settings

The system settings screen is accessed from the Movements Summary Screen by selecting the **System Settings...** entry from the **Configuration** menu:



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2.1 General Settings

- If the **Show details for each movement in a new window** box is ticked, movement details are always displayed in a new details window when the user opts to display details of a movement. Otherwise, only one details window is created and only details of the last selected movement are displayed.
- The **Tank Contents Colour** drop down list allows configuration of the way that tank graphics are to be displayed on the details window
 - **Use System Settings** - Use the flag from the Tankvision Professional system settings.
 - **Use Product Colour** - Use the colour defined for the product that the tank contains.
 - **Use Flow Colour** - Use Blue if the tank level is going up, Brown if the tank level is going down, or green if the tank is static.

2.2 Archive

If this box is ticked, movements will be automatically deleted from the system after the entered number of days.

2.3 New Movements

The settings in this section affect the New Movement Wizard.

- The **Default Product** is the product that is initially selected on the **Movement Details Page** of the New Movement Wizard.
- If the **Include notes page** box is ticked, the **Notes Page** will be displayed when navigating through the New Movement Wizard. Otherwise the **Notes Page** will be skipped.
- If the **Include timed activities** box is ticked, the **Timed Activities Page** will be displayed when navigating through the New Movement Wizard (so long as at least one timed activity has been configured). Otherwise the **Timed Activities Page** will be skipped.

2.4 Operation

- If the **Enter manual data for subject tank when changing status** box is ticked, the user will be shown a screen allowing the manual data figures for the associated tanks to be entered when opening, suspending, reopening or closing movement subjects.
- If the **Amend planned quantity for subject when opening** box is ticked, the user will be shown a screen allowing the planned quantities to be amended when opening or reopening movement subjects.

 Note!

If the planned quantity would take the tank associated with the movement subject above the maximum operating level or below the minimum operating level, the screen will be displayed anyway.

- If the **Enter manual data for movement tank when changing status** box is ticked, the user will be shown a screen allowing the manual data figures for the associated tanks to be entered when opening, suspending, reopening or closing movement tanks.
- If the **Amend planned quantity for movement tank when opening** box is ticked, the user will be shown a screen allowing the planned quantities to be amended when opening or reopening movement tanks.

 Note!

If the planned quantity would take the tank associated with the movement tank above the maximum operating level or below the minimum operating level, the screen will be displayed anyway.

- If the **Enter manual data for tank when changing status of timed activity** box is ticked, the user will be shown a screen allowing the manual data figures for the associated tanks to be entered when opening, suspending, reopening or closing timed activities.
- If the **Amend planned time for activity when opening** box is ticked, the user will be shown a screen allowing the planned time to be amended when opening or reopening timed activities.
- If the **Suspend and reopen all open movements** box is ticked, all open movements will be automatically suspended and reopened at the entered time. The normal use for this is to allow the inventory figures to be broken down into figures for each day the movement is open by suspending and reopening all open movements at midnight.

3 Alarm Defaults

The system settings screen is accessed from the Movements Summary Screen by selecting the **Alarm Defaults...** entry from the **Configuration** menu:

The screenshot shows the 'Default Alarm Configuration' window with the following settings:

- Movement Alarms:**
 - Raise alarm when the total net flow for the movement exceeds m³/hr
 - Reraise active flow alarms every minutes
 - Raise low flow alarms for:
- Tank Alarms:**
 - Raise first alarm minutes before target level is due to be reached
 - Raise second alarm minutes before target level is due to be reached
 - Hysteresis for time to target alarms: Minutes
 - Raise first alarm when product level is within mm of target level
 - Raise second alarm when product level is within mm of target level
 - Raise alarm when target level is achieved
 - Raise alarm when product level exceeds target level by mm
 - Hysteresis for target level alarms: mm
 - Raise alarm when flow rate falls below m³/hr, unless the movement has been open for less than minutes
 - Raise alarm when flow is more than m³/hr in the wrong direction unless the movement has been open for less than minutes
- Timed Activity Alarms:**
 - Raise first alarm minutes before activity is due to be closed.
 - Raise second alarm minutes before activity is due to be closed.
 - Raise alarm when activity should be closed.
 - Raise alarm when activity should have been closed minutes earlier.

Buttons: Add, Remove, OK, Cancel

This screen is used for entering the default values for alarms. Once a movement has been created, the alarm settings for that movement can be amended using the **Edit Alarm Configuration** option. See the Movements Operation Manual for more details.

3.1 Movement Alarms

The settings in this section are used to configure the alarms for a complete movement.

- If the **Raise alarm when the total net flow for the movement exceeds** box is ticked, an alarm will be raised for the movements when the total flow for all open receipt tanks on the movement is difference from the total flow for all open load tanks on the movement by more than the entered amount.
- If the **Reraise active flow alarms** box is ticked, active low flow alarms and reverse flow alarms will be raised at the entered time period. If this box is not ticked, low flow alarms are automatically reset when the flow from the tank rises above the entered threshold and will be reraised when the flow from the tank next drops below the threshold. Similarly reverse flow alarms are automatically reset when the flow from the tank drops below the entered threshold and are reraised when the flow from the tank rises above the threshold.
- The **Raise low flow alarms for** drop down list allows configuration of the direction for which low flow alarms are to be raised.

3.2 Tank Alarms

Default values for tank alarms can be set on a global basis, but can also be overridden for specific tanks. A new set of overrides can be added by clicking on the **Add** button. This will cause a new screen to be displayed allowing selection of the tank for which overrides are to be set:



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The tank for which overrides are to be set should be selected from the drop down list of tanks. Click the **OK** button to add the new set of overrides to the list.

Similarly a set of overrides for a tank can be removed by selecting the tank in the list and then clicking the **Remove** button.

The individual settings have the following effect:

- If the **Raise first alarm ... minutes before target level is due to be reached** box is ticked an alarm will be raised for a movement tank when the estimated time to finish for that tank falls below the entered value. By default this is an alarm of low severity.
- If the **Raise second alarm ... minutes before target level is due to be reached** box is ticked an alarm will be raised for a movement tank when the estimated time to finish for that tank falls below the entered value. By default this is an alarm of high severity.
- The **Hysteresis for time to target alarms** field controls when the time to target alarms are reset. If an anomaly in the flow rate causes the time to target alarms to be raised prematurely by causing an incorrect calculation of the estimated time to finish, they will be reset when the estimated time to finish exceeds the entered threshold by the hysteresis amount.
- If the **Raise first alarm when product level is within ... mm of target level** box is ticked an alarm will be raised when the product level in the tank differs from the target level by less than the entered value. By default this is an alarm of low severity.
- If the **Raise second alarm when product level is within ... mm of target level** box is ticked an alarm will be raised when the product level in the tank differs from the target level by less than the entered value. By default this is an alarm of high severity.
- If the **Raise alarm when target level is achieved** box is ticked an alarm will be raised when the product level in the tank reaches the target level. By default this is an alarm of high severity.
- If the **Raise alarm when product level exceeds target level by ... mm** box is ticked an alarm will be raised when the product level in the tank exceeds the target level by the entered value. By default this is an alarm of critical severity.
- The **Hysteresis for target level alarms** box controls when the target level alarms are reset. If an anomaly in the product level reading causes the target level alarms to be raised prematurely, they will be reset when the difference between the product level and target level exceeds the entered value for that alarm plus the hysteresis value.
- If the **Raise alarm when flow rate falls below ... , unless the movement has been open for less than ... minutes** box is ticked an alarm will be raised if the flow rate for the tank falls below the entered threshold, unless the movement tank has been open for less than the entered time.
 - If the **Reraise active flow alarms** box is ticked (see Movement Alarms) this alarm will be reraised at the specified time interval for as long as the flow rate for the tank remains below the entered threshold.
 - If the **Reraise active flow alarms** box is not ticked, the alarm will be raised once when the flow rate falls below the entered threshold. The alarm will not be reraised unless the flow rate rises above the entered threshold and then falls below it again.

- If the **Raise alarm when flow is more than ... in the wrong direction unless the movement has been open for less than ... minutes** box is ticked an alarm will be raised if the flow rate for the tank is in the wrong direction by more than the entered threshold, unless the movement tank has been open for less than the entered time.
 - If the **Reraise active flow alarms** box is ticked (see Movement Alarms) this alarm will be reraised at the specified time interval for as long as the flow rate for the tank remains above the entered threshold in the wrong direction.
 - If the **Reraise active flow alarms** box is not ticked, the alarm will be raised once when the flow rate rises above the entered threshold in the wrong direction. The alarm will not be reraised unless the flow rate falls below the entered threshold in the wrong direction and then rises above it again.

3.3 Timed Activity Alarms

Default values for timed activity alarms can be set on a global basis, but can also be overridden for specific tanks and/or timed activities. A new set of overrides can be added by clicking on the **Add** button. This will cause a new screen to be displayed allowing selection of the timed activity and tank for which overrides are to be set:



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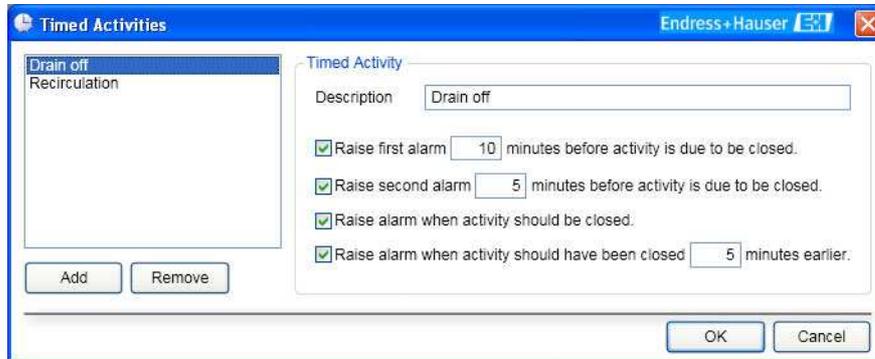
The timed activity and tank for which overrides are to be set should be selected from the drop down lists. Click the **OK** button to add the new set of overrides to the list. Similarly a set of overrides for a timed activity/tank combination can be removed by selecting the entry in the list and then clicking the **Remove** button.

The individual settings have the following effect:

- If the **Raise first alarm ... minutes before activity is due to be closed** box is ticked, an alarm will be raised for a timed activity when the time remaining for that activity falls below the entered value. By default this is an alarm of low severity.
- If the **Raise second alarm ... minutes before activity is due to be closed** box is ticked, an alarm will be raised for a timed activity when the time remaining for that activity falls below the entered value. By default this is an alarm of high severity.
- If the **Raise alarm when activity should be closed** box is ticked an alarm will be raised when the timed activity should be completed (based on the planned time).
- If the **Raise alarm when activity should have been closed ... minutes earlier** box is ticked, an alarm will be raised for a timed activity when the time the activity has been open exceeds the planned time by more than the entered amount.

4 Timed Activities

The timed activities screen is accessed from the Movements Summary Screen by selecting the **Timed Activities...** entry from the **Configuration** menu:



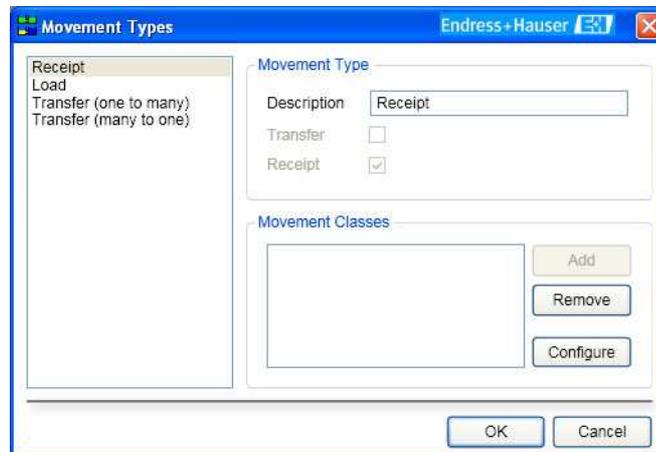
BA00394C_0005

This screen is used for creating, deleting and editing timed activities.

- To **create** a new timed activity, click the **Add** button. A new activity will be added to the list as the currently selected entry. Details of the new activity can then be edited.
- To **remove** a timed activity, select the activity to be removed in the list of activities and then click the **Remove** button.
- To **edit** a timed activity, select the activity to be edited in the list of activities. The current values for the activity will be displayed on the right hand part of the screen and can be edited as required.

5 Movement Types

The movement types screen is accessed from the Movements Summary Screen by selecting the **Movement Types...** entry from the **Configuration** menu:



BA00394G_0006

This screen is used for editing movement types. There are four movement types:

- Receipt
- Load
- Transfer (one to many)
- Transfer (many to one)

To edit a movement type, select the movement type from the list of movement types. The current values for the movement type will be displayed on the right hand part of the screen. Although the description can be edited, the movement type can still be determined using the **Transfer** and **Receipt** fields which are not editable. To associate a movement class with the currently selected movement type, click the **Add** button. A list of the currently configured movement classes will be displayed:



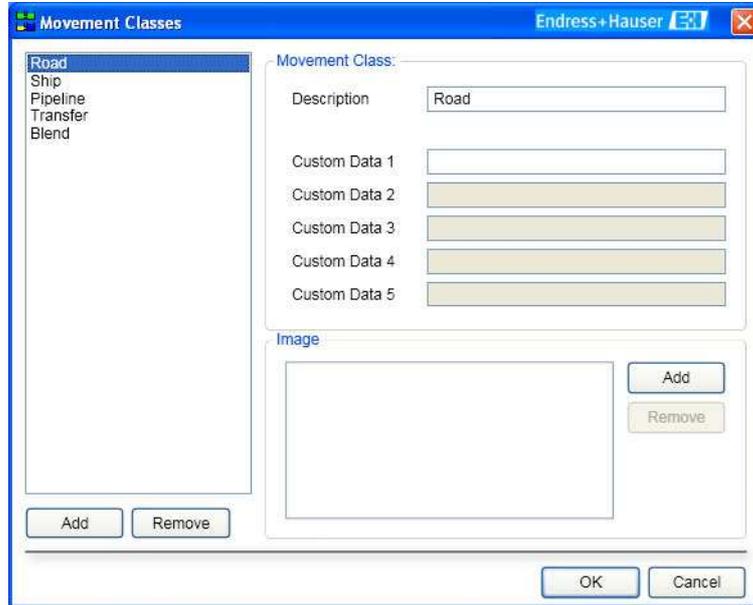
BA00394G_0007

Select the movement class to be associated with the currently selected movement type from the list. The movement class will then be added to the list of movement classes associated with the currently selected movement type. To disassociate a movement class from the currently selected movement type, select the movement class in the list of associated movement classes and click the **Remove** button.

To edit available movement classes, click the **Configure** button. This will display the **Movement Classes** screen.

6 Movement Classes

The movement classes screen is accessed from the Movements Summary Screen by selecting the **Movement Classes...** entry from the **Configuration** menu or by clicking the **Configure** button on the **Movement Types** screen:



BA00394G_0008

This screen is used for creating, deleting and editing movement classes:

- **Creating a movement class**

To create a new movement class, click the **Add** button under the list of existing movement classes. A new movement class will be added to the list as the currently selected entry. Details of the new movement class can then be edited.

- **Deleting a movement class**

To remove a movement class, select the movement class to be removed in the list of movement classes and then click the **Remove** button under the list of movement classes.

- **Editing a movement class**

To edit a movement class, select the movement class to be edited in the list of movement classes. The current values for the movement class will be displayed on the right hand part of the screen and can be edited as required.

Movement class parameters

- **Description**

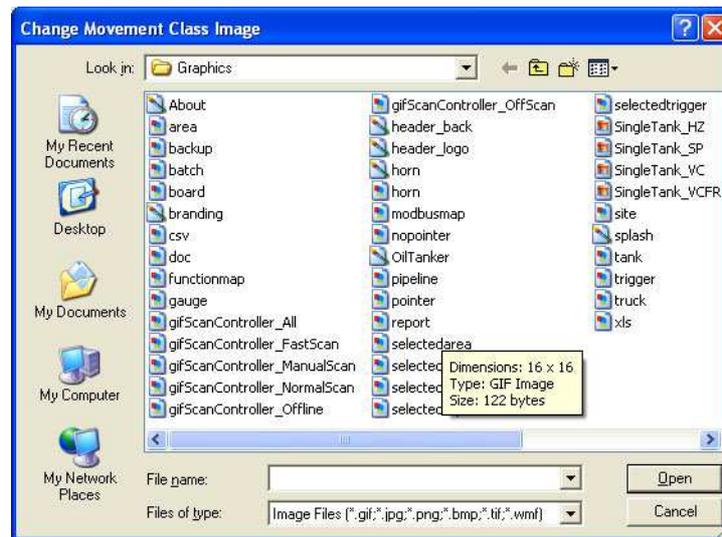
A description of the movement class.

- **Custom Data n**

The caption to be displayed next to the corresponding custom data field in the movement header.

- **Add/Change Image**

The text on the button in the image area will be 'Add' if the movement class does not currently have an image associated with it, or 'Change' if it does. Clicking this button will display a file selection screen:



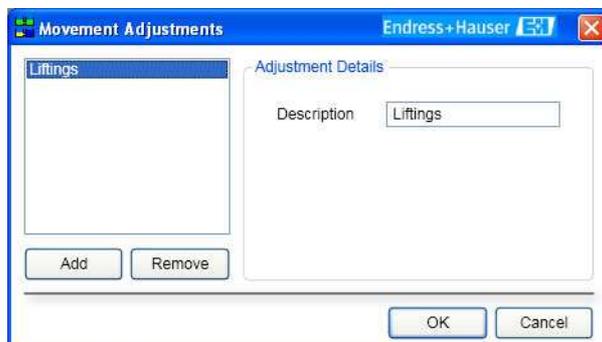
Navigate to the file to be used as the image for the movement class and then click the 'Open' button.

- **Remove Image**

If the 'Remove' button in the image area is clicked, the image for the movement class will be removed.

7 Adjustments

The adjustments screen is accessed from the Movements Summary Screen by selecting the **Adjustments...** entry from the **Configuration** menu:



BA00394G_0010

This screen is used for creating, deleting and editing adjustments.

- **Creating an adjustment**

To create a new adjustment, click the 'Add' button. A new adjustment will be added to the list as the currently selected entry. Details of the new adjustment can then be edited.

- **Deleting an adjustment**

To remove an adjustment, select the adjustment to be removed in the list of adjustments and then click the 'Remove' button.

- **Editing an adjustment**

To edit an adjustment, select the adjustment to be edited in the list of adjustments. The current values for the adjustment will be displayed on the right hand part of the screen and can be edited as required.

8 Maintain View

The columns displayed in the summary views and historical view can be changed or reordered along with the order that the movement records are displayed in. To modify a view on the summary screen, make sure that the view to be changed is the view being displayed and then select **Maintain View...** from the **Options** menu. To modify the view on the historical movements screen, simply select **Maintain View...** from the **Options** menu. The following screen will be displayed:

The screenshot shows the 'Edit View' dialog box with the following configuration:

- General:** Display movement subjects which are not tanks
- Fields:**
 - Available fields: Movement Name:, Tank ID, Direction/Activity Indicator, Subject, Product Name, Target Level, Product Level, Volume Flow Rate, Start Time, ETF
 - Selected field: Movement Name: (added to the Field box)
 - Buttons: Add, Remove
- Sorts:**
 - Keep components for each movement together
 - Sort by: Movement ID (Ascending)
 - Then: (Ascending)
 - Then: (Ascending)
 - Then: (Ascending)
 - Then: (Ascending)

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8.1 General

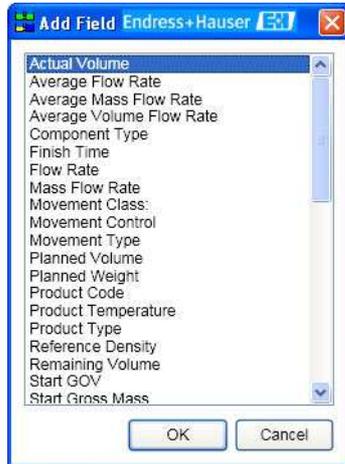
- If the **Display movement subjects which are not tanks** box is ticked then movement subjects which are not tanks will be displayed in the view. If the box is not ticked then only movement subjects which are tanks will be displayed in the view.

8.2 Fields

The fields section contains a list of the fields currently displayed in the view. The fields that have a gray background are fields that cannot be reordered or removed.

Adding a new field

To add a new field to the list, click the **Add** button. A screen containing a list of available fields will be displayed:



BA00394G_0012

Select the field to be added and click the **OK** button.

Removing a field

To remove a field from the list, select it and then click the **Remove** button.

Moving a field up and down

To move a field up the list (left in the view), select it and then click the **↑** button.

To move a field down the list (right in the view), select it and click the **↓** button.

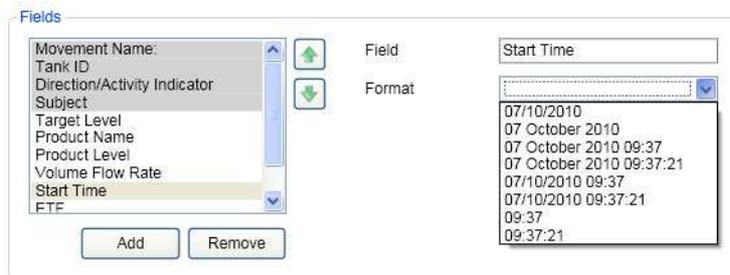
Further configurations

For some fields it is possible to configure them further:

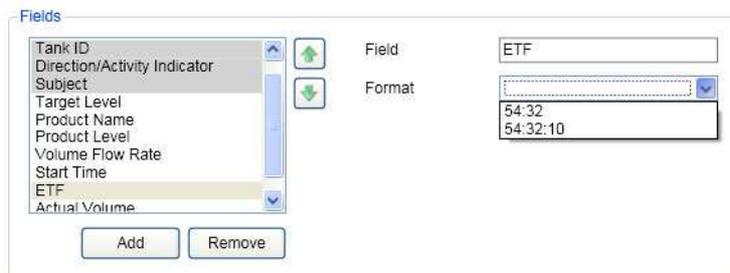
- If a field is only applicable to a tank (for example 'Target Level'), an alternative field can be selected for entries that are timed activities:



- If a field contains a date/time value, a format can be specified:



- If a field contains a time span value, a format can be specified:



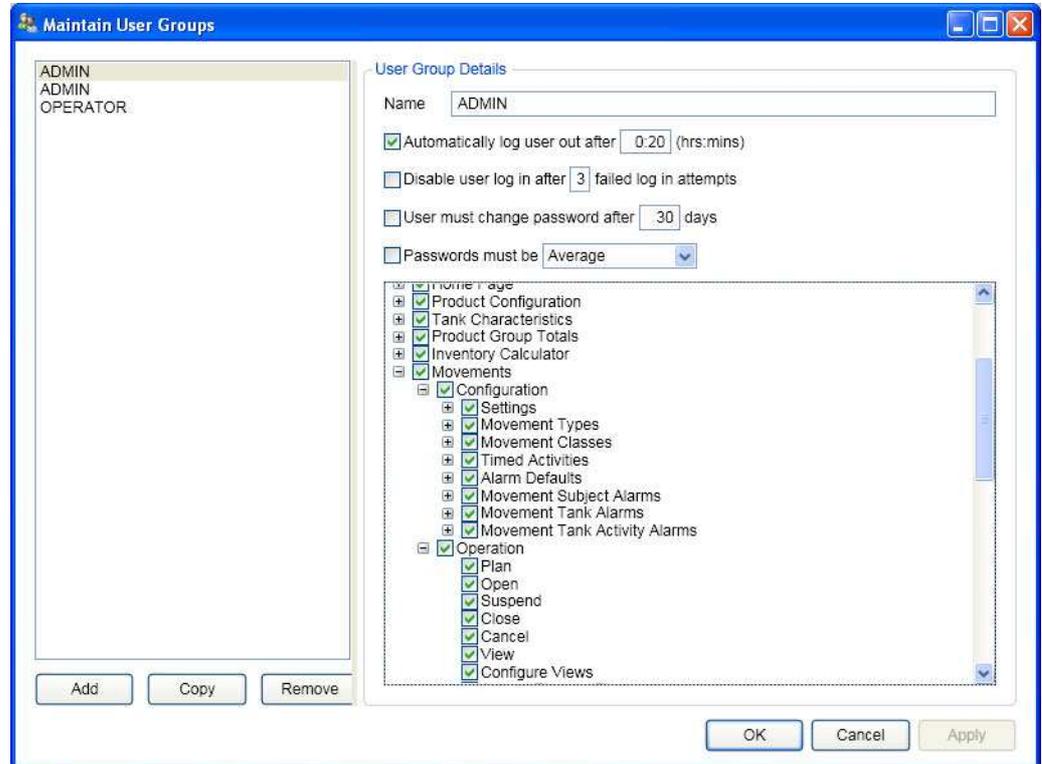
8.3 Sorts

If the **Keep components for each movement together** box is ticked, the rows for each movement will be kept together and the entire movement will be sorted according to the sort criteria.

The sort criteria are set by selecting a field from the drop down list of fields and then selecting the order from the corresponding drop down list. Up to five fields can be chosen as sort criteria.

9 Security

The access rights for the movements system are set on a user group basis. For the access rights to be applied to a specific user they must be a member of the given user group. The access rights are maintained using the **Maintain User Groups** option from the **Security** menu on the Tankvision Professional Home Page:



BA00394G_0016

The access rights relating to the movements system all come under the **Movements** entry in the access rights list (see above). To amend the access rights for a user group, select the relevant user group from the list of user groups and then tick and untick the relevant boxes in the access rights list.

9.1 Configuration

9.1.1 Settings

View

This option should be ticked if members of the user group are allowed to view the **System Settings** screen.

Edit

This option should be ticked if members of the user group are allowed to edit the movement settings.

9.1.2 Movement Types

View

This option should be ticked if members of the user group are allowed to view the **Movement Types** screen.

Edit

Edit - This option should be ticked if members of the user group are allowed to edit movement type details.

Add Movement Class

This option should be ticked if members of the user group are allowed to associate movement classes with movement types.

Remove Movement Class

This option should be ticked if members of the user group are allowed to disassociate movement classes from movement types.

9.1.3 Movement Classes

View

This option should be ticked if members of the user group are allowed to view the **Movement Classes** screen.

Edit

This option should be ticked if members of the user group are allowed to edit movement class details.

Add

This option should be ticked if members of the user group are allowed to create new movement classes.

Remove

This option should be ticked if members of the user group are allowed to remove movement classes.

9.1.4 Timed Activities

View

This option should be ticked if members of the user group are allowed to view the **Timed Activities** screen.

Edit

This option should be ticked if members of the user group are allowed to edit timed activity details.

Add

This option should be ticked if members of the user group are allowed to create new timed activities.

Remove

This option should be ticked if members of the user group are allowed to remove timed activities.

9.1.5 Alarm Defaults

View Movement Alarms

This option should be ticked if members of the user group are allowed to view the default movement alarm settings on the **Alarm Defaults** screen.

Edit Movement Alarms

This option should be ticked if members of the user group are allowed to edit the default movement alarm settings.

View Tank Alarms

This option should be ticked if members of the user group are allowed to view the default tank alarm settings on the **Alarm Defaults** screen.

Edit Tank Alarms

This option should be ticked if members of the user group are allowed to edit the default tank alarm settings.

Add Tank Alarm Override

This option should be ticked if members of the user group are allowed to create new tank override alarm settings.

Remove Tank Alarm Override

This option should be ticked if members of the user group are allowed to remove tank override alarm settings.

View Timed Activity Alarms

This option should be ticked if members of the user group are allowed to view the default timed activity alarm settings on the **Alarm Defaults** screen.

Edit Timed Activity Alarms

This option should be ticked if members of the user group are allowed to edit the default timed activity alarm settings.

Add Timed Activity Alarm Override

This option should be ticked if members of the user group are allowed to create new timed activity override alarm settings.

Remove Timed Activity Alarm Override

This option should be ticked if members of the user group are allowed to remove timed activity override alarm settings.

9.1.6 Movement Subject Alarms**View**

This option should be ticked if members of the user group are allowed to view the alarm settings for movement subjects.

Edit

This option should be ticked if members of the user group are allowed to edit the alarm settings for movement subjects.

9.1.7 Movement Tank Alarms

View

This option should be ticked if members of the user group are allowed to view the alarm settings for movement tanks.

Edit

This option should be ticked if members of the user group are allowed to edit the alarm settings for movement tanks.

9.1.8 Movement Tank Activity Alarms

View

This option should be ticked if members of the user group are allowed to view the alarm settings for timed activities on movements.

Edit

This option should be ticked if members of the user group are allowed to edit the alarm settings for timed activities on movements.

9.1.9 Adjustments

View

This option should be ticked if members of the user group are allowed to view the **Adjustments** screen.

Edit

This option should be ticked if members of the user group are allowed to edit adjustment details.

Add

This option should be ticked if members of the user group are allowed to create new adjustments.

Remove

This option should be ticked if members of the user group are allowed to remove adjustments.

9.2 Operation

Plan

This option should be ticked if members of the user group are allowed to plan movements.

Open

This option should be ticked if members of the user group are allowed to open movements.

Suspend

This option should be ticked if members of the user group are allowed to suspend movements.

Close

This option should be ticked if members of the user group are allowed to close movements.

Cancel

This option should be ticked if members of the user group are allowed to cancel movements.

View

This option should be ticked if members of the user group are allowed to view movements.

Configure Views

This option should be ticked if members of the user group are allowed to Configure Views.

Amend Planned Figures

This option should be ticked if members of the user group are allowed to amend planned figures.

Add Tank

This option should be ticked if members of the user group are allowed to add extra tanks to movements.

Add Timed Activity

This option should be ticked if members of the user group are allowed to add extra timed activities to movements.

Edit Movement Header

This option should be ticked if members of the user group are allowed to edit the header details of movements.

Movement Certificate

This option should be ticked if members of the user group are allowed to view and edit movement certificates.

Movement Log

This option should be ticked if members of the user group are allowed to view movement logs.

View History

This option should be ticked if members of the user group are allowed to view the history of movements.

View Historical Movements

This option should be ticked if members of the user group are allowed to view the historical movements screen.

9.2.1 Tank Limits

Plan Above Max Operating Figures

This option should be ticked if members of the user group are allowed to plan movements that would take tanks above their max operating level/volume.

Plan Below Min Operating Figures

This option should be ticked if members of the user group are allowed to plan movements that would take tanks below their min operating level/volume.

Open Above Max Operating Figures

This option should be ticked if members of the user group are allowed to open movements that would take tanks above their max operating level/volume.

Open Below Min Operating Figures

This option should be ticked if members of the user group are allowed to open movements that would take tanks below their min operating level/volume.

10 Glossary

Load	Product is taken from a tank to a place outside the site
Receipt	Product arrives from outside the site to be stored in a tank on site
Transfer	Product is moved between two or more storage vessels on the site
ETF	Estimated time to finish
Actual Volume	The volume transferred since the movement was opened
Planned Volume	The volume to be transferred by the movement
Subject	The movement subject is the tank or transport which will receive or export the whole of the planned volume.

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