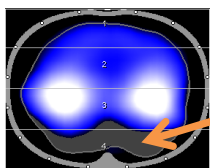
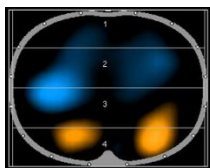


Principle: Compare highest PEEP level with lower PEEP levels. Use the *End-inspiratory Trend View* to analyse the loss of ventilation due to a reduction in PEEP.

Step 1: Perform a decremental PEEP trial
According to hospital standards



Contour of ventilated area identifies lung areas that can be ventilated. Grey areas represent areas that are not ventilated at the current cursor position but were ventilated at other points of time during the displayed period.

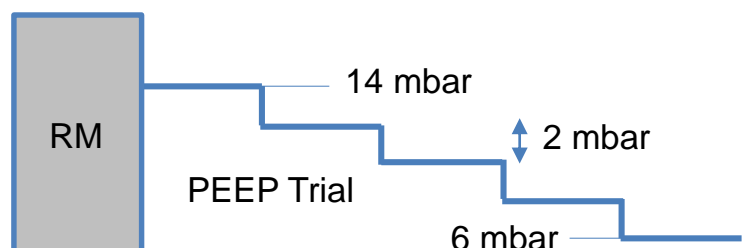


Differential image in *End-insp. Trend View*
Orange colour = ventilation loss
Blue colour = ventilation win

Example:

Decremental PEEP trial

- Initial recruitment maneuver
- PEEP steps of 2 mbar



Definition of derecruitment:



A loss of ventilation towards lower PEEP levels indicates the onset of derecruitment. This reduced ventilation can be caused by going below the alveoli's closing pressure and the subsequent collapse of alveoli. This phenomenon is often accompanied by a low end-expiratory lung volume in these regions.

Step 2: Assess loss of ventilation in supine patients

1) Before the Recruitment Maneuver is started:

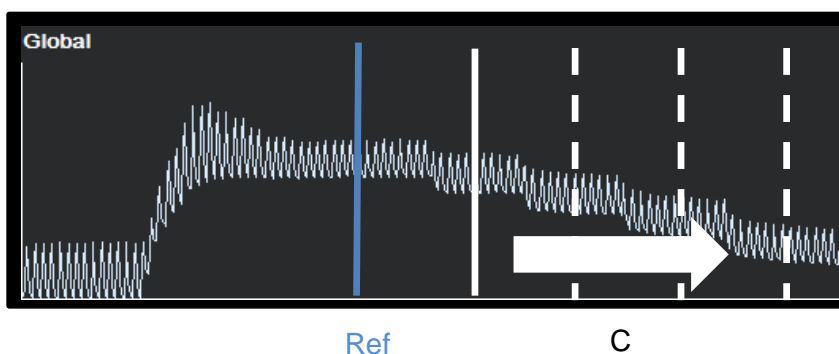
Set the Regions of Interest (ROIs) to “layers”

(adjust their height if required: e.g. in obese patients, adjust the height of the ROIs, so that ROI 1 properly represents ventral ventilation)

2) After the PEEP trial: Open the End-inspiratory Trend View:

Compare the highest PEEP (Cursor *Ref*) stepwise against lower PEEP levels (Cursor *C*)

Reference (*Ref*) remains at highest PEEP, *C* positioned at decremental PEEP steps



3) Identify loss of ventilation:

Differential image: Orange colour indicates reduced ventilation

Tidal image: Contour of ventilated area helps identify areas with complete lack of ventilation

Tidal variations: Loss of ventilation in ROI 4 in supine patients (e.g. TV ROI 4 < 10 % or drop of > 5% vs. the percentage at the highest PEEP)

What to look for in the End-inspiratory Trend View

Examples	Tidal Image Ref	Tidal Image C	Differential Image	TV ROI 4 [%]				
PEEP 14 vs. PEEP 12				<table border="1"> <tr> <td>Ref</td> <td>C</td> </tr> <tr> <td>11</td> <td>9</td> </tr> </table>	Ref	C	11	9
Ref	C							
11	9							
PEEP 14 vs. PEEP 10				<table border="1"> <tr> <td>Ref</td> <td>C</td> </tr> <tr> <td>11</td> <td>5</td> </tr> </table>	Ref	C	11	5
Ref	C							
11	5							
PEEP 14 vs. PEEP 8				<table border="1"> <tr> <td>Ref</td> <td>C</td> </tr> <tr> <td>11</td> <td>1</td> </tr> </table>	Ref	C	11	1
Ref	C							
11	1							