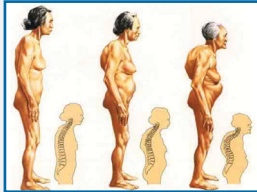
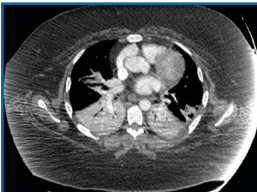


INTELLiVENT[®]-ASV[®] - Frequently Asked Questions

	Question	Comments	Answer	
Ventilation settings	<p>How to determine which specific condition to select?¹</p>	<p>INTELLiVENT-ASV changes target ranges and initial settings depending on the set specific condition to make sure the ventilation settings are appropriate for the patient.</p>	<ul style="list-style-type: none"> • ARDS: PaO₂/FiO₂ (P/F ratio) ≤ 200 • Chronic hypercapnia: PaCO₂ ≥ 50 mmHg in past medical history • Brain injury: Contraindication for permissive hypercapnia • None: Other cases 	
	<p>How to determine the correct height setting for patients with spinal deformities?</p>	<p>Patient height misrepresents the actual IBW.</p>	<p>Use their height as a younger adult prior to the onset of the deformity as reference.</p>	
	<p>How to determine the correct height setting for very obese patients?</p>	<p>Obesity does not affect the size of the lungs.</p>	<p>Use the patient's actual height.</p>	
	<p>What to consider during a bronchoscopy?</p>	<p>CAUTION! Measurement and calculation of respiratory mechanics (RCexp, Cstat, Rinsp) can be affected during bronchoscopy.</p>	<ul style="list-style-type: none"> • Increase Plimit.² • Set %MinVol and PEEP to Manual. • Set Oxygen to Manual or Automatic. • After the bronchoscopy, reset Plimit to the previous setting, and consider setting %MinVol, PEEP, Oxygen to Automatic.³ 	
	<p>How to increase minute ventilation when %MinVol is already at 200%?</p>	<ul style="list-style-type: none"> • Unusual situation • May occur with brain injury patients with ARDS 	<ul style="list-style-type: none"> • Check that the patient height and sex settings are correct. • If the patient is passive, consider adjusting the PetCO₂ target range. Set the %MinVol controller to Manual³ so you can set %MinVol above 200%. • If the patient is passive, check the blood gas analysis (BGA), and adjust the PetCO₂ target range⁴ according to pH and the PaCO₂ clinical goal. • If the patient is active, check for high respiratory drive caused by non-respiratory problems, such as metabolic acidosis, anxiety, pain, and so on. 	

1. On some ventilators, the ARDS/Chronic hypercapnia/Brain injury conditions are listed under the heading, *Specific conditions*; on other ventilators, the heading is *Patient conditions*.

2. Depending on your ventilator, this parameter is named Plimit or Pasvlimit.

3. Setting a control to **Automatic** can also be referred to as *activating a controller*; setting a control to **Manual** can be referred to as *deactivating a controller*.

	Question	Comments	Answer
	On this page, discussions of target range and target shift refer primarily to the PetCO2 target range and the associated Target Shift control. ⁵		
Ventilation settings	How to adjust the target ranges using the Target Shift control?	<p>In normal individuals, the gradient between arterial and alveolar CO₂ (PaCO₂–PetCO₂), referred to as the <i>CO₂ gradient</i>, varies between 2 and 5 mmHg (0.2 to 0.6 kPa). The gradient is widened by abnormalities in the V/Q ratio, and is altered by deadspace (V_d/V_t) ventilation or shunt.</p> <p>In COPD and ARDS, the gradient is between 5 and 15 mmHg (0.6 and 2 kPa).</p>	<p>PetCO₂ target zone</p> <ul style="list-style-type: none"> If the desired PaCO₂ is <i>lower than the current value</i>, shift the PetCO₂ target range to the <i>left</i>, so that the desired PetCO₂ is in the middle of the new target range. If the desired PaCO₂ is <i>higher than the current value</i>, shift the PetCO₂ target range to the <i>right</i>, so that the desired PetCO₂ is in the middle of the new target range. The target shift can be set up to ±20 mmHg (2.6 kPa).
	When to adjust the PetCO ₂ target range?	<p>The Target Shift control allows you to adjust the PetCO₂ target range for CO₂ elimination (in accordance with the PaCO₂ value from the blood gas analysis). If the default target ranges are not adequate and do not match the clinician’s clinical goals, you can shift the PetCO₂ target by ±20 mmHg.</p> <p>For more details, see the <i>INTELLiVENT-ASV Operator’s Manual</i>.</p>	<ul style="list-style-type: none"> Verify that the appropriate specific conditions are set for the patient. If the patient treatment is not matching your clinical goals, consider adjusting the PetCO₂ or SpO₂ target range; you adjust the range using the Target Shift control. <p>Consider adjusting the PetCO₂ target range when there is a large CO₂ gradient.</p> <ul style="list-style-type: none"> For passive patients During the acute phase only Set the Target Shift control back to 0 mmHg (0 kPa) when starting Quick Wean
	How to set the initial PetCO ₂ target range?	<p>The default PetCO₂ target range settings are for most cases appropriate. It is important, however, to always review the settings.</p> <p>Reasons to change the target range include:</p> <ul style="list-style-type: none"> The range is not suitable for a particular patient There is a large CO₂ gradient <p>For details, see the <i>INTELLiVENT-ASV Operator’s Manual</i>.</p>	<ul style="list-style-type: none"> Select one or more specific conditions only if the patient has a condition; in case of doubt, do NOT select any of the options. Use the default PetCO₂ target range initially. Perform blood gas analysis (BGA) after 30 minutes. Adjust the PetCO₂ target ranges using the BGA values as a guide.⁴
Quick Wean	Should the PetCO ₂ target range be adjusted when using Quick Wean?	<p>During weaning, patients are considered stable. Therefore, the CO₂ gradient is usually normal for the selected specific condition.</p> <p>Generally, there is no need to perform additional adjustments.</p>	<ul style="list-style-type: none"> If the patient is breathing spontaneously and Quick Wean is activated, make sure the Target Shift control is set to 0 mmHg (0 kPa). Use the default PetCO₂ and SpO₂ target ranges when using Quick Wean. When activated, Quick Wean shifts the PetCO₂ range to the right by up to +5 mmHg to support spontaneous breathing.

4. Use the **Target Shift** control to adjust the target ranges. For details, see the *INTELLiVENT-ASV Operator’s Manual* for your ventilator.

5. While not discussed very much here, you can also move (shift) the target range for SpO₂ to the left and to the right. For details, see the *INTELLiVENT-ASV Operator’s Manual*.

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	Question	Comments	Answer
Quick Wean	When can/should activation of automated spontaneous breathing trials (SBTs) be considered?	Only consider performing SBTs once the patient has been evaluated for extubation.	Consider SBT when “non-respiratory” readiness-to-wean criteria are met: <ul style="list-style-type: none"> • Patient is awake • Cough reflex is present • Hemodynamics are stable • Minimal vasopressor support is required
	Why do SBTs not start?	Possible causes: <ul style="list-style-type: none"> • The patient is <i>passive</i> • %MinVol is set to Manual • Quick Wean is disabled • Current SpO2 value is outside of the SpO2 target range 	<ul style="list-style-type: none"> • Set %MinVol to Automatic • Wait for the SpO2 / PetCO2 value to enter the target range • Make sure the patient is breathing spontaneously and meets the criteria before enabling Quick Wean • Make sure Quick Wean is enabled
	When can/should enabling of Quick Wean (without automated SBTs) be considered?	Quick Wean (without automated SBTs) can be enabled even if the patient is still on low levels of sedation and/or low doses of vasopressors.	Consider enabling Quick Wean without automated SBTs when all of the following criteria are met: <ul style="list-style-type: none"> • Sedation is stopped or decreased to “comfort sedation” • Patient has been breathing spontaneously for at least 1 hour • Hemodynamic condition is stable • Oxygenation is adequate
	How often can/should performing SBTs be considered?	<p>First SBT was successful Assess patient readiness for extubation, and continue with NIV or High flow oxygen therapy, if necessary.</p> <p>First SBT failed</p> <ul style="list-style-type: none"> • Identify the causes of the failure and the reasons the patient continues to require ventilation support. Correct if possible. • Try a second SBT after the causes for failure have been corrected, if the patient still meets the weaning criteria. 	If your organization’s weaning protocol does not indicate otherwise, it is recommended <i>not</i> to do more than one SBT within a 24-hour period. ^{6,7}

6. Esteban, A. N Engl J Med. 1995 Feb 9;332(6):345-50.
7. MacIntyre, N. Chest. 2001 Dec;120(6 Suppl):375S-95S.

	Question	Comments	Answer
Quick Wean	How can the number of automated SBTs performed per day be limited?	<ul style="list-style-type: none"> • SBT can be manually started from the Start SBT tab as soon as the patient triggers 5 consecutive spontaneous breaths. • Touch Stop SBT to stop an ongoing SBT. 	<p>When Quick Wean is enabled:</p> <ul style="list-style-type: none"> • You can disable automated SBTs and start an SBT manually after the patient takes five (5) consecutive spontaneous breaths. • To specify when automated SBTs can take place, set the After and Before times for the SBT time range parameter. <p>To perform a single automated SBT</p> <p>HAMILTON-G5/S1 Set Time between 2 SBTs to --- (OFF) → Only one SBT will be performed.</p> <p>HAMILTON-C3/C6 Set Time between 2 SBTs to [30 – 240 min] → If only one SBT is planned, deactivate automated SBTs after the first SBT is completed. To do so, in the INTELLiVENT-ASV Settings > Quick Wean window, clear the Automatic SBT checkbox.</p>
	Can Quick Wean be enabled for difficult-to-wean patients?		<p>Yes. For these patients, proceed as follows:</p> <ul style="list-style-type: none"> • Enable Quick Wean. • Closely monitor the patient's breathing efforts and signs of fatigue. • In case of doubt, disable Quick Wean and provide appropriate support.