DID YOU KNOW INFOGRAPHIC –
RECRUITMENT MANEUVERS

Dräger

INTERMITTENT SIGHS / INTERMITTENT HIGH LEVEL OF PEEP

Description

Sigh is one of the first reported recruitment maneuver: applied interposed with monotonous ventilation to mimic physiological breathing as it occurs in healthy subjects.

This recruitment maneuver consists of high VT in controlled mode or high PEEP up to a specific plateau pressure level, for a selected number of cycles.

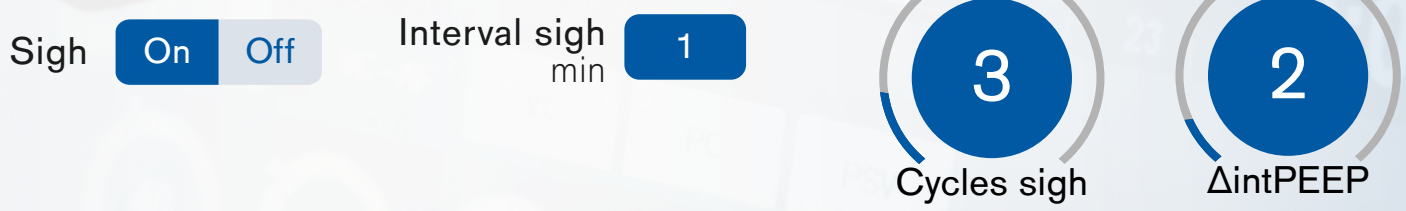
How to perform it with a Dräger ventilator?

The Sigh function can be activated in all ventilation modes with mandatory breaths, except for the PC-APRV ventilation mode. During a sigh, the end-expiratory pressure PEEP increases by the set value of the intermittent PEEP.

The time between two sigh phases can be set with the therapy control "Interval sigh". After this interval has passed, the next sigh phase is started with a complete breath. (20 seconds to 180 minutes)

The therapy control "Cycles sigh" controls how many respiratory cycles are covered by the sigh phase. The mean airway pressure is higher, and a longer filling time is normally available. (1 to 20 exhalations)

On pressure-controlled ventilation, the inspiratory pressures Pinsp, Psupp increase by the amount ΔintPEEP (0 to 20 cmH2O/mbar/hPa)



Examples

Nicoló Patroniti, Giuseppe Foti, Barbara Cortinovis, Elena Maggioni, Luca M. Bigatello, Maurizio Cereda, Antonio Pesenti; Sigh Improves Gas Exchange and Lung Volume in Patients with Acute Respiratory Distress Syndrovme Undergoing Pressure Support Ventilation. Anesthesiology 2002; 96:788–794 doi: https://doi.org/10.1097/00000542-200204000-00004

Conclusions: The addition of 1 sigh per minute during PSV in patients with early ARDS improved gas exchange and lung volume and decreased the respiratory drive.

References:

Santos RS, Silva PL, Pelosi P, Rocco PR. Recruitment maneuvers in acute respiratory distress syndrome: The safe way is the best way. World J Crit Care Med. 2015;4(4):278-286. Published 2015 Nov 4. doi:10.5492/wjccm.v4.i4.278

Levine M, Gilbert R, Auchincloss JH. A comparison of the effects of sighs, large tidal volumes, and positive end expiratory pressur in assisted ventilation. Scand J Respir Dis 1972; 53: 101-108 [PMID: 5052722]

Pelosi P, Cadringher P, Bottino N, Panigada M, Carrieri F, Riva E, Lissoni A, Gattinoni L. Sigh in acute respiratory distress syndrome. Am J Respir Crit Care Med 1999; 159: 872-880 [PMID: 10051265 DOI: 10.1164/ajrccm.159.3.9802090]