Supplement 2. Comparison of calculated mechanical power and Bland Altman graphs of the comparison between the calculated and measured (geometrically derived) mechanical power.

Etable 1. Comparison of the mechanical power of different modes. Mechanical power calculated with algebraic equations.

Differences (Calculated)				
Modes	N	Absolute (J/min) (se)	Relative (%)	p value
PCV <sub>cal-ex</sub> vs VCV0 <sub>cal-ex</sub>	57	1.89 (0.20)	9.5	< 0.0001
PCV <sub>cal-ex</sub> vs VCV10 <sub>cal-ex</sub>	56	-0.25 (0.39)	1.1	0.5
VCV0 <sub>cal-ex</sub> vs VCV10 <sub>cal-ex</sub>	56	-2.12 (0.27)	10.6	< 0.0001
PCV <sub>cal-sur</sub> vs VCV0 <sub>cal-sur</sub>	57	2.43 (0.17)	11.7	<0.0001
PCV <sub>cal-sur</sub> vs VCV10 <sub>cal-sur</sub>	57	0.86 (0.15)	3.7	<0.0001
VCV0 <sub>cal-sur</sub> vs VCV10 <sub>cal-sur</sub>	57	-1.57 (0.18)	7.6	<0.0001

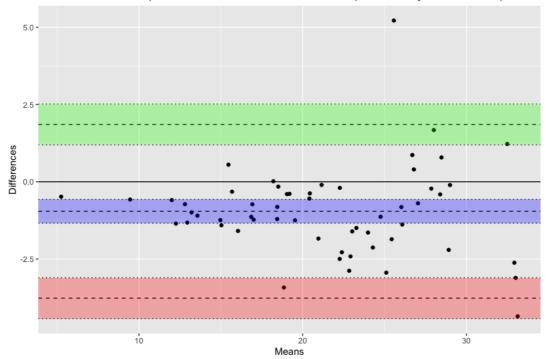
The difference of the mean from the t-test differs because of missing values (see text).

The difference of the mean is calculated by subtracting the latter mode from the first mode in the first column The relative difference is calculated by dividing the difference of the mean by the mean mechanical power of the first mode.

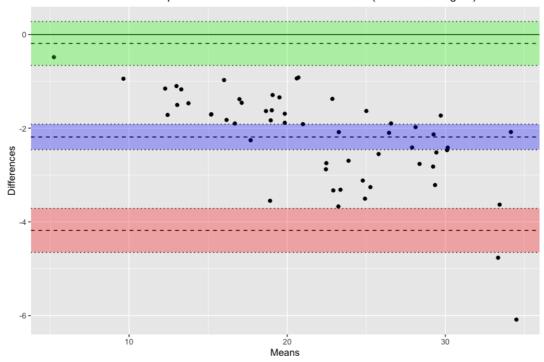
PCV = pressure-controlled ventilation, VCV-0 = volume-controlled ventilation with a constant flow without pause time, VCV-10 = volume-controlled ventilation with constant flow and a inspiratory pause time of 10% of the total cycle. MP = mechanical Power,  $MP_{dyn} = dynamic mechanical power$ ,  $MP_L = Transpulmonary mechanical power$ .  $MP_{calc-ex}$  is the calculated MP according to an extensive equation.  $MP_{calc-sur}$  is the calculated MP according to a simplified, surrogate equation.

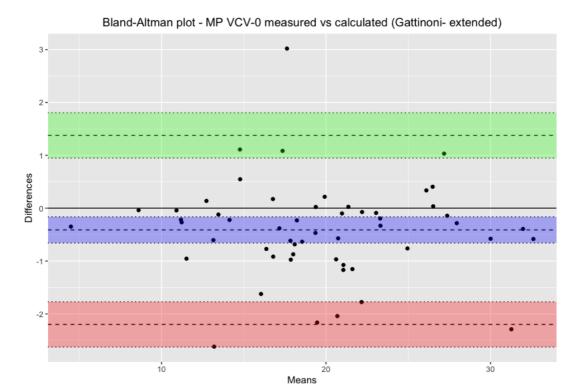
## Bland-Altman Plots



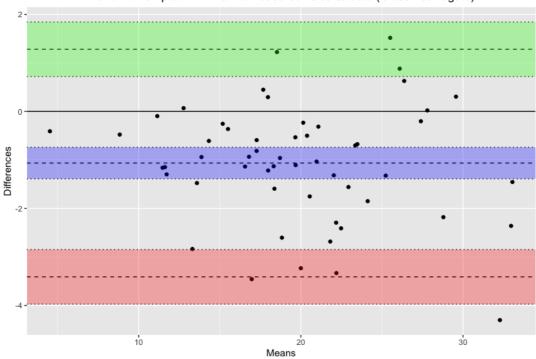


## Bland-Altman plot - MP PCV measured vs calculated (Becher - surrogate)

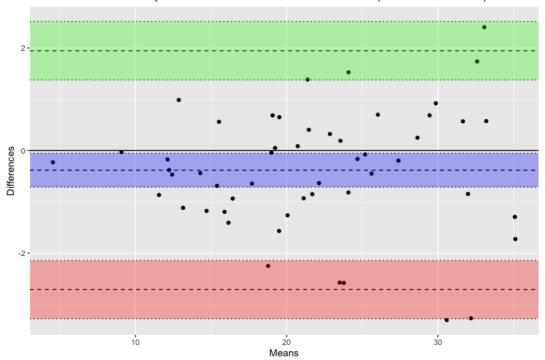








Bland-Altman plot - MP VCV-10 measured vs calculated (Gattinoni- extended)



Bland-Altman plot - MP VCV-10 measured vs calculated (Giosa - surrogate)

