

Supplemental Table 1. Median differences in PEEP and PIP with 95% confidence intervals (95% CI) for the upper and lower limits of agreement (LOA).*

Machine	Median (cmH ₂ O)	95% LOA	95% CI lower LOA	95% CI upper LOA
Drager Perseus PIP	-0.4	(-1.1, 0.405)	(-1.2, -1.1)	(0.25, 0.7)
Drager Perseus PEEP	0.1	(-0.4, 0.6)	(-1.0, -0.2)	(0.6, 0.75)
Drager Apollo PIP	-0.4	(-1.0, 0.5)	(-1.2, -1.0)	(0.4, 0.7)
Drager Apollo PEEP	-0.1	(-0.9, 1.0)	(-0.95, -0.90)	(0.81, 1.1)
GE Avance PIP	1.7	(0.8, 3.0)	(0.8, 1.0)	(2.85, 3.1)
GE Avance PEEP	0.1	(-0.35, 0.7)	(-0.4, -0.3)	(0.6, 0.9)

*PEEP = peak end-expiratory pressure, PIP = peak inspiratory pressure

Supplemental Table 2. Differences in PEEP and PIP when disconnecting the WAGS on the Dräger Perseus A500, Dräger Apollo, and GE Avance CS2 at prescribed PEEP levels of 0 and 5 cmH2O.*

	Fresh Gas Flows (LPM)	Parameter	Dräger Perseus A500				Dräger Apollo				GE Avance CS ²			
			Estimate (WAGS off vs on)	95% Confidence Limits		p-value [†]	Estimate (WAGS off vs on)	95% Confidence Limits		p-value [†]	Estimate (WAGS off vs on)	95% Confidence Limits		p-value [†]
PEEP	2	Prescribed PEEP = 0	<0.0001	-0.11	0.11	1.00	0.02	-0.04	0.08	0.59	8.62	8.55	8.69	<0.0001
		Prescribed PEEP = 5	-0.16	-0.27	-0.05	0.01	-0.08	-0.14	-0.02	0.02	5.84	5.77	5.91	<0.0001
	4	Prescribed PEEP = 0	-0.08	-0.16	0.00	0.07	0.20	0.13	0.27	<0.0001	8.40	8.30	8.50	<0.0001
		Prescribed PEEP = 5	-0.24	-0.32	-0.16	<0.0001	0.46	0.39	0.53	<0.0001	5.80	5.70	5.90	<0.0001
	6	Prescribed PEEP = 0	0.02	-0.08	0.12	0.76	0.08	0.01	0.15	0.03	8.56	8.49	8.63	<0.0001
		Prescribed PEEP = 5	0.04	-0.06	0.14	0.51	0.04	-0.03	0.11	0.30	6.12	6.05	6.19	<0.0001
	8	Prescribed PEEP = 0	0.00	-0.06	0.06	1.00	0.12	0.03	0.21	0.01	8.56	8.48	8.64	<0.0001
		Prescribed PEEP = 5	0.02	-0.04	0.08	0.55	-0.02	-0.11	0.07	0.71	6.58	6.50	6.66	<0.0001
	10	Prescribed PEEP = 0	0.20	0.12	0.28	<0.0001	0.04	-0.05	0.13	0.47	8.62	8.56	8.68	<0.0001
		Prescribed PEEP = 5	0.00	-0.08	0.08	1.00	0.22	0.13	0.31	<0.0001	6.86	6.80	6.92	<0.0001
15	Prescribed PEEP = 0	0.08	-0.08	0.24	0.40	0.10	0.05	0.15	0.00	1.08	0.95	1.21	<0.0001	
	Prescribed PEEP = 5	0.22	0.06	0.38	0.01	0.04	-0.01	0.09	0.16	1.08	0.95	1.21	<0.0001	
PIP	2	Prescribed PEEP = 0	-0.04	-0.42	0.34	0.89	-0.28	-0.53	-0.03	0.05	6.80	6.30	7.30	<0.0001
		Prescribed PEEP = 5	-0.88	-1.26	-0.50	<0.0001	-0.40	-0.65	-0.15	0.00	4.56	4.06	5.06	<0.0001
	4	Prescribed PEEP = 0	-0.70	-0.94	-0.46	<0.0001	1.48	0.78	2.18	<0.0001	6.58	5.93	7.23	<0.0001
		Prescribed PEEP = 5	-0.30	-0.54	-0.06	0.02	1.62	0.92	2.32	<0.0001	3.82	3.17	4.47	<0.0001
	6	Prescribed PEEP = 0	0.12	-0.08	0.32	0.31	0.64	0.42	0.86	<0.0001	6.48	5.90	7.06	<0.0001
		Prescribed PEEP = 5	0.34	0.14	0.54	0.00	0.14	-0.08	0.36	0.27	4.28	3.70	4.86	<0.0001
	8	Prescribed PEEP = 0	0.52	0.35	0.69	<0.0001	-0.34	-0.65	-0.03	0.05	6.70	6.14	7.26	<0.0001
		Prescribed PEEP = 5	0.08	-0.09	0.25	0.43	0.30	-0.01	0.61	0.09	4.80	4.24	5.36	<0.0001
	10	Prescribed PEEP = 0	0.12	-0.06	0.30	0.26	-0.10	-0.36	0.16	0.52	5.14	4.46	5.82	<0.0001
		Prescribed PEEP = 5	0.08	-0.10	0.26	0.47	-0.30	-0.56	-0.04	0.04	5.10	4.42	5.78	<0.0001
15	Prescribed PEEP = 0	0.08	-0.11	0.27	0.48	0.38	0.07	0.69	0.03	1.36	0.86	1.86	<0.0001	
	Prescribed PEEP = 5	0.16	-0.03	0.35	0.14	0.02	-0.29	0.33	0.94	0.22	-0.28	0.72	0.46	

*PEEP = peak end-expiratory pressure, PIP = peak inspiratory pressure, WAGS On = waste anesthesia gas suction connected, WAGS Off = waste anesthesia gas suction disconnected, FGF = fresh gas flow, LPM = liters per minute

[†]The FDR correction has been applied to all p-values and sequentially adjusts each p-value to prevent the FDR from rising above 0.05. Statistical significance is met by p-values <0.05.

Supplemental Table 3. Differences in PEEP and PIP when removing the visual indicator bag after disconnecting the WAGS on the GE Avance CS2 at prescribed PEEP levels of 0 and 5 cmH2O.*

	Fresh Gas Flows (LPM)	Parameter	GE Avance CS ²			
			Estimate (WAG off, bag off vs WAG on)	95% Confidence Limits		p-value [†]
PEEP	2	Prescribed PEEP = 0	0.12	0.0593	0.1807	0.0002
		Prescribed PEEP = 5	0.2	0.1393	0.2607	<0.0001
	4	Prescribed PEEP = 0	-0.4	-0.4901	-0.3099	<0.0001
		Prescribed PEEP = 5	-0.32	-0.4101	-0.2299	<0.0001
	6	Prescribed PEEP = 0	-0.3	-0.3701	-0.2299	<0.0001
		Prescribed PEEP = 5	-0.28	-0.3501	-0.2099	<0.0001
	8	Prescribed PEEP = 0	-0.24	-0.3287	-0.1513	<0.0001
		Prescribed PEEP = 5	-0.04	-0.1287	0.0487	0.4547
	10	Prescribed PEEP = 0	-0.32	-0.4185	-0.2215	<0.0001
		Prescribed PEEP = 5	-0.2	-0.2985	-0.1015	0.0002
PIP	2	Prescribed PEEP = 0	-7.98	-8.1059	-7.8541	<0.0001
		Prescribed PEEP = 5	-6.7	-6.8259	-6.5741	<0.0001
	2	Prescribed PEEP = 0	0.42	-0.1579	0.9979	0.2091
		Prescribed PEEP = 5	0.98	0.4021	1.5579	0.0018
	4	Prescribed PEEP = 0	-0.78	-1.3687	-0.1913	0.017
		Prescribed PEEP = 5	-0.76	-1.3487	-0.1713	0.0203
	6	Prescribed PEEP = 0	-0.4	-0.9368	0.1368	0.1959
		Prescribed PEEP = 5	-0.62	-1.1568	-0.0832	0.038
	8	Prescribed PEEP = 0	-0.38	-0.9539	0.1939	0.2559
		Prescribed PEEP = 5	-0.68	-1.2539	-0.1061	0.0335
PIP	10	Prescribed PEEP = 0	-0.78	-1.3497	-0.2103	0.0133
		Prescribed PEEP = 5	-0.38	-0.9497	0.1897	0.2524
	15	Prescribed PEEP = 0	-6.04	-6.5314	-5.5486	<0.0001
		Prescribed PEEP = 5	-5.66	-6.1514	-5.1686	<0.0001

*PEEP = peak end-expiratory pressure, PIP = peak inspiratory pressure, WAGS On = waste anesthesia gas suction connected, WAGS Off = waste anesthesia gas suction disconnected, FGF = fresh gas flow, LPM = liters per minute

[†]The FDR correction has been applied to all p-values and sequentially adjusts each p-value to prevent the FDR from rising above 0.05. Statistical significance is met by p-values <0.05.

Supplemental Table 4. Differences in PEEP and PIP when connecting medical vacuum to the AGSS on the Dräger Perseus A500, Dräger Apollo, and GE Avance CS2 at prescribed PEEP levels of 0 and 5 cmH2O.*

			Dräger Perseus A500				Dräger Apollo				GE Avance CS ²			
	Fresh Gas Flows (LPM)	Parameter	Estimate (WAGS off vs on)	95% Confidence Limits	p-value [†]	Estimate (WAGS off vs on)	95% Confidence Limits	p-value [†]	Estimate (WAGS off vs on)	95% Confidence Limits	p-value [†]			
PEEP	2	Prescribed PEEP = 0	-0.12	-0.223	-0.017	0.0372	0.18	0.087	0.273	0.0003	-0.28	-0.347	-0.214	<0.0001
		Prescribed PEEP = 5	-0.16	-0.263	-0.057	0.0047	2.22E-16	-0.093	0.093	1	0	-0.067	0.0665	1
	4	Prescribed PEEP = 0	-0.1	-0.183	-0.017	0.0308	-0.04	-0.164	0.084	0.5888	-0.7	-0.789	-0.611	<0.0001
		Prescribed PEEP = 5	-0.52	-0.603	-0.437	<0.0001	0.7	0.576	0.824	<0.0001	-0.44	-0.529	-0.351	<0.0001
	6	Prescribed PEEP = 0	-0.06	-0.138	0.018	0.1834	-0.08	-0.177	0.017	0.1504	-0.5	-0.574	-0.427	<0.0001
		Prescribed PEEP = 5	0.06	-0.018	0.138	0.1834	0.24	0.143	0.337	<0.0001	-0.28	-0.354	-0.207	<0.0001
	8	Prescribed PEEP = 0	-0.02	-0.091	0.051	0.6386	-0.08	-0.169	0.009	0.115	-0.34	-0.414	-0.267	<0.0001
		Prescribed PEEP = 5	-0.04	-0.111	0.031	0.3399	0.16	0.071	0.249	0.0009	-0.12	-0.194	-0.047	0.0028
	10	Prescribed PEEP = 0	3.33E-16	-0.086	0.086	1	-0.16	-0.244	-0.076	0.0004	-0.4	-0.454	-0.346	<0.0001
		Prescribed PEEP = 5	-0.02	-0.106	0.066	0.7088	0.26	0.176	0.344	<0.0001	-0.24	-0.294	-0.186	<0.0001
15	Prescribed PEEP = 0	-0.28	-0.367	-0.193	<0.0001	-2.22E-16	-0.067	0.067	1	-8.02	-8.094	-7.947	<0.0001	
	Prescribed PEEP = 5	-0.14	-0.227	-0.053	0.0033	0.22	0.153	0.287	<0.0001	-6.78	-6.854	-6.707	<0.0001	
PIP	2	Prescribed PEEP = 0	-0.06	-0.267	0.147	0.6308	1.2	0.89	1.51	<0.0001	-1.14	-1.678	-0.602	<0.0001
		Prescribed PEEP = 5	-0.86	-1.067	-0.653	<0.0001	1.96	1.65	2.27	<0.0001	0.5	-0.038	1.0377	0.1001
	4	Prescribed PEEP = 0	0.62	0.383	0.857	<0.0001	2.52	2.228	2.812	<0.0001	-1.74	-2.385	-1.095	<0.0001
		Prescribed PEEP = 5	0.64	0.403	0.877	<0.0001	3.56	3.268	3.852	<0.0001	-1.64	-2.285	-0.995	<0.0001
	6	Prescribed PEEP = 0	0.56	0.277	0.843	0.0002	2.72	2.437	3.003	<0.0001	-1.5	-2.01	-0.99	<0.0001
		Prescribed PEEP = 5	0.84	0.557	1.123	<0.0001	1.88	1.597	2.163	<0.0001	-1.32	-1.83	-0.81	<0.0001
	8	Prescribed PEEP = 0	0.64	0.479	0.801	<0.0001	1.98	1.647	2.313	<0.0001	-1.24	-1.792	-0.688	<0.0001
		Prescribed PEEP = 5	0.46	0.299	0.621	<0.0001	2.42	2.087	2.753	<0.0001	-1.16	-1.712	-0.608	<0.0001
	10	Prescribed PEEP = 0	0.46	0.246	0.674	<0.0001	1.18	0.9	1.46	<0.0001	-1.36	-1.889	-0.831	<0.0001
		Prescribed PEEP = 5	0.56	0.346	0.774	<0.0001	1.96	1.68	2.24	<0.0001	-0.72	-1.249	-0.191	0.014
15	Prescribed PEEP = 0	0.16	-0.04	0.36	0.1636	2.24	1.496	2.985	<0.0001	-6.26	-6.777	-5.743	<0.0001	
	Prescribed PEEP = 5	0.48	0.28	0.68	<0.0001	1.94	1.196	2.685	<0.0001	-6.02	-6.537	-5.503	<0.0001	

*PEEP = peak end-expiratory pressure, PIP = peak inspiratory pressure, WAGS On = waste anesthesia gas suction connected, VAC on = medical vacuum connected, FGF = fresh gas flow, LPM = liters per minute

[†]The FDR correction has been applied to all p-values and sequentially adjusts each p-value to prevent the FDR from rising above 0.05. Statistical significance is met by p-values <0.05.