

**Standard Series**  
**Size: 1**

**Sound data for Ventilator Unit VN 101 - VN 103**

**VN 101 Fan: D 540/E 25**

*sound pressure level $L_p$ in dB (A)							
voltage [V]	80	100	125	150	170	190	230
<b>inlet</b>	40	46	53	58	61	63	66
<b>discharge</b>	41	48	54	60	63	65	68

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200		
<b>80</b>	46	41	41	46	43	38	37	32	48	<b>80</b>	47	43	43	48	44	40	38	33	49		
<b>100</b>	51	47	48	52	49	45	43	39	54	<b>100</b>	52	49	49	54	51	46	45	40	56		
<b>125</b>	56	54	54	59	56	52	50	46	61	<b>125</b>	58	56	56	60	58	54	52	47	62		
<b>150</b>	60	59	59	63	61	58	56	51	66	<b>150</b>	62	61	61	65	63	59	57	53	67		
<b>170</b>	63	62	62	66	65	61	59	54	69	<b>170</b>	64	64	64	68	66	63	61	56	71		
<b>190</b>	64	64	64	68	67	63	61	56	71	<b>190</b>	66	66	66	70	69	65	63	58	73		
<b>230</b>	67	67	67	71	70	66	64	59	74	<b>230</b>	69	69	69	73	72	68	66	61	76		

**VN 102 Fan: D 640/E 35**

*sound pressure level $L_p$ in dB (A)							
voltage [V]	80	100	125	150	170	190	230
<b>inlet</b>	40	48	56	61	64	66	68
<b>discharge</b>	42	49	57	63	66	68	70

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200		
<b>80</b>	46	42	42	47	43	39	37	33	48	<b>80</b>	48	43	43	48	45	40	39	34	50		
<b>100</b>	52	49	49	54	51	47	45	40	56	<b>100</b>	54	50	51	55	52	48	47	42	57		
<b>125</b>	58	57	57	61	59	55	53	49	63	<b>125</b>	60	58	59	63	61	57	55	50	65		
<b>150</b>	63	62	62	66	65	61	59	54	69	<b>150</b>	64	64	64	68	66	63	61	56	71		
<b>170</b>	65	65	65	69	68	64	62	57	72	<b>170</b>	67	67	67	71	70	66	64	59	74		
<b>190</b>	67	67	67	71	70	67	65	60	74	<b>190</b>	69	69	69	73	72	68	66	62	76		
<b>230</b>	69	69	69	73	72	69	67	62	76	<b>230</b>	70	71	71	75	74	71	69	64	78		

**VN 103 Fan: DS 6-740/E 35**

*sound pressure level $L_p$ in dB (A)							
voltage [V]	80	100	125	150	170	190	230
<b>inlet</b>	40	46	53	57	60	62	65
<b>discharge</b>	44	51	57	62	65	67	70

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200		
<b>80</b>	45	41	41	46	43	39	37	32	48	<b>80</b>	50	46	46	51	47	43	42	37	52		
<b>100</b>	51	48	48	53	50	46	44	39	54	<b>100</b>	55	52	53	57	54	50	49	44	59		
<b>125</b>	55	54	54	58	56	52	50	45	61	<b>125</b>	60	58	59	63	61	57	55	50	65		
<b>150</b>	59	58	59	63	61	57	55	51	65	<b>150</b>	64	63	63	67	66	62	60	55	70		
<b>170</b>	61	61	61	65	64	60	58	53	68	<b>170</b>	66	66	66	70	69	65	63	58	73		
<b>190</b>	63	63	63	67	66	62	60	55	70	<b>190</b>	68	68	68	72	71	67	65	60	75		
<b>230</b>	65	66	66	69	69	65	63	58	73	<b>230</b>	70	71	71	74	74	70	68	63	78		

**Standard Series**  
**Size: 1**

**Sound data for Ventilator Unit VN 104**

**VN 104 Fan: DS 6-740/E 65**

*sound pressure level $L_p$ in dB (A)							
voltage [V]	80	100	125	150	170	190	230
<b>inlet</b>	39	45	51	56	58	61	64
<b>discharge</b>	43	50	55	60	63	66	69

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200		voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	
<b>80</b>	44	40	40	45	42	37	36	31	47		<b>80</b>	49	44	45	50	46	42	40	35	51	
<b>100</b>	49	46	47	51	48	44	43	38	53		<b>100</b>	54	51	51	56	53	49	47	42	58	
<b>125</b>	54	52	52	57	54	50	49	44	59		<b>125</b>	59	57	57	61	59	55	53	48	63	
<b>150</b>	58	57	57	61	59	55	53	49	64		<b>150</b>	62	61	62	66	64	60	58	53	68	
<b>170</b>	60	59	60	63	62	58	56	51	66		<b>170</b>	65	64	64	68	67	63	61	56	71	
<b>190</b>	62	62	62	66	64	61	59	54	69		<b>190</b>	67	66	67	70	69	66	64	59	74	
<b>230</b>	65	65	65	69	68	65	62	58	72		<b>230</b>	70	70	70	74	73	70	67	62	77	

**Standard Series**  
**Size: 2**

**Sound data for Ventilator Unit VN 201 - VN 203**

**VN 201 Fan: D 770/E 65**

*sound pressure level $L_p$ in dB (A)							
voltage [V]	80	100	125	150	170	190	230
<b>inlet</b>	41	47	53	58	61	63	66
<b>discharge</b>	45	51	57	62	65	67	71

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200		voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	
<b>80</b>	50	46	42	45	44	42	42	38	49		<b>80</b>	51	47	48	49	49	45	43	40	53	
<b>100</b>	55	51	48	51	50	47	48	44	55		<b>100</b>	55	53	53	55	55	51	49	46	59	
<b>125</b>	60	57	53	57	56	54	54	50	61		<b>125</b>	60	59	59	61	61	57	56	52	65	
<b>150</b>	63	62	58	61	60	59	59	55	66		<b>150</b>	64	63	64	66	66	62	60	57	70	
<b>170</b>	65	64	60	64	63	61	61	58	69		<b>170</b>	66	66	66	69	69	65	63	59	73	
<b>190</b>	67	66	63	66	65	64	64	60	71		<b>190</b>	68	68	69	71	71	68	66	62	75	
<b>230</b>	70	70	66	70	69	67	67	63	74		<b>230</b>	71	72	72	75	75	71	69	65	79	

**VN 202 Fan: D 770/E 80**

*sound pressure level $L_p$ in dB (A)							
voltage [V]	80	100	125	150	170	190	230
<b>inlet</b>	40	49	57	63	65	66	69
<b>discharge</b>	44	53	61	67	69	70	74

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	C 45-11200		voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	
<b>80</b>	50	45	41	44	43	41	41	37	48		<b>80</b>	50	47	47	48	48	44	43	39	52	
<b>100</b>	57	54	50	53	52	50	50	46	57		<b>100</b>	57	55	55	57	57	53	52	48	61	
<b>125</b>	62	61	57	60	59	58	58	54	65		<b>125</b>	63	62	63	65	65	61	59	55	69	
<b>150</b>	67	66	62	66	65	63	63	59	71		<b>150</b>	68	68	68	71	71	67	65	61	75	
<b>170</b>	69	68	64	68	67	66	66	62	73		<b>170</b>	69	70	70	73	73	70	68	64	77	
<b>190</b>	69	69	65	69	68	67	67	63	74		<b>190</b>	70	71	71	74	74	71	69	65	78	
<b>230</b>	72	72	68	72	71	70	70	66	77		<b>230</b>	73	74	74	77	77	74	72	68	82	

**VN 203 Fan: D 770/D 1**

*sound pressure level $L_p$ in dB (A)					
voltage [V]	120	180	230	280	400
<b>inlet</b>	48	54	62	65	72
<b>discharge</b>	52	58	66	70	76

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200		voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	
<b>120</b>	55	52	48	51	50	48	48	45	56		<b>120</b>	56	54	54	56	56	52	50	46	60	
<b>180</b>	60	58	54	57	56	54	54	50	62		<b>180</b>	61	59	59	62	62	58	56	52	66	
<b>230</b>	66	65	61	65	64	62	62	58	70		<b>230</b>	67	67	67	70	70	66	64	60	74	
<b>280</b>	69	68	65	68	67	66	66	62	73		<b>280</b>	70	70	70	73	73	70	68	64	77	
<b>400</b>	74	74	71	75	74	73	72	68	80		<b>400</b>	75	77	77	80	80	77	74	70	84	

**Standard Series**  
**Size: 3**

**Sound data for Ventilator Unit VN 308 - VN 310**

**VN 308 Fan: D 970/D 2**

*sound pressure level $L_p$ in dB (A)					
voltage [V]	120	180	230	280	400
inlet	52	57	62	66	71
discharge	54	60	65	68	73

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)									$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)									$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200
120	58	55	52	55	54	52	52	48	59	120	57	55	56	58	58	54	52	48	62
180	63	61	57	61	60	58	58	54	65	180	62	61	61	64	64	60	58	54	68
230	67	66	62	66	65	63	63	59	70	230	66	66	66	69	69	65	63	59	73
280	69	69	65	69	68	67	67	63	74	280	68	69	69	72	72	69	67	63	76
400	73	74	70	74	73	72	72	67	79	400	72	74	74	77	77	74	72	67	81

**VN 309 Fan: DS 9-070/D 2.5**

*sound pressure level $L_p$ in dB (A)					
voltage [V]	80	100	125	150	170
inlet	52	62	66	69	74
discharge	55	64	68	71	76

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)									$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)									$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200
120	59	56	52	56	55	53	53	49	60	120	58	56	56	59	59	55	53	49	63
180	66	65	61	65	64	62	62	58	70	180	65	65	63	68	68	64	62	58	72
230	69	69	65	69	68	67	67	63	74	230	68	69	69	72	72	69	67	63	76
280	72	72	68	72	71	70	70	66	77	280	71	72	72	75	75	72	70	66	79
400	75	76	73	77	76	75	74	70	82	400	74	76	77	80	80	77	74	70	84

**VN 310 Fan: DS 9-070/D 5**

*sound pressure level $L_p$ in dB (A)					
voltage [V]	80	100	125	150	170
inlet	57	67	72	75	78
discharge	59	69	74	77	80

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)									$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)									$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200
120	62	60	57	60	59	57	57	53	65	120	61	60	61	63	63	59	57	53	67
180	70	70	66	70	69	68	67	63	75	180	69	70	70	73	73	70	67	63	77
230	74	74	71	75	74	73	72	68	80	230	73	74	75	78	78	75	72	68	82
280	76	77	74	78	77	76	75	71	83	280	75	77	78	81	81	78	75	71	85
400	78	80	76	81	80	79	78	74	86	400	77	80	80	84	84	81	78	74	88

**Standard Series**  
**Size: 3**

**Sound data for Ventilator Unit VN 311**

**VN 311 Fan: DS 9-001/D 5**

*sound pressure level $L_p$ in dB (A)					
voltage [V]	120	180	230	280	400
<b>inlet</b>	56	67	72	75	78
<b>discharge</b>	58	69	74	77	80

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)									$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)									$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200
<b>120</b>	62	60	56	59	58	57	57	53	64	<b>120</b>	61	60	60	62	62	59	57	53	66
<b>180</b>	70	70	66	70	69	68	67	63	75	<b>180</b>	69	70	70	73	73	70	67	63	77
<b>230</b>	74	74	71	75	74	73	72	68	80	<b>230</b>	73	74	75	78	78	75	72	68	82
<b>280</b>	76	77	74	78	77	76	75	71	83	<b>280</b>	75	77	78	81	81	78	75	71	85
<b>400</b>	78	80	77	81	80	79	79	75	86	<b>400</b>	77	80	81	84	84	81	79	75	88

**Standard Series**  
**Size: 4**

**Sound data for Ventilator Unit VN 406 - VN 407**

**VN 406 Fan: DS 9-070/D 5**

*sound pressure level $L_p$ in dB (A)					
voltage [V]	120	180	230	280	400
inlet	57	67	72	75	78
discharge	59	69	74	77	80

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200		voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	
120	62	60	57	60	59	57	57	53	65		120	61	60	61	63	63	59	57	53	67	
180	70	70	66	70	69	68	67	63	75		180	69	70	70	73	73	70	67	63	77	
230	74	74	71	75	74	73	72	68	80		230	73	74	75	78	78	75	72	68	82	
280	76	77	74	78	77	76	75	71	83		280	75	77	78	81	81	78	75	71	85	
400	78	80	76	81	80	79	78	74	86		400	77	80	80	84	84	81	78	74	88	

**VN 407 Fan: DS 9-001/D 5**

*sound pressure level $L_p$ in dB (A)					
voltage [V]	80	100	125	150	170
inlet	56	67	72	75	78
discharge	58	69	74	77	80

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200		voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	
120	62	60	56	59	58	57	57	53	64		120	61	60	60	62	62	59	57	53	66	
180	70	70	66	70	69	68	67	63	75		180	69	70	70	73	73	70	67	63	77	
230	74	74	71	75	74	73	72	68	80		230	73	74	75	78	78	75	72	68	82	
280	76	77	74	78	77	76	75	71	83		280	75	77	78	81	81	78	75	71	85	
400	78	80	77	81	80	79	79	75	86		400	77	80	81	84	84	81	79	75	88	

**Standard Series**  
**Size: 4**

**Sound data for Ventilator Unit VN 409 - VN 411**

**VN 409 Fan: DS 0-101/TD 10**

*sound pressure level $L_p$ in dB (A)					
voltage [V]	120	180	230	280	400
inlet	62	71	75	78	81
discharge	65	73	78	81	84

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200		
120	67	66	62	66	65	63	63	59	70	120	66	66	66	69	69	65	63	59	73		
180	73	74	70	74	73	72	72	68	79	180	72	74	74	77	77	74	72	68	81		
230	77	78	74	79	78	77	76	72	83	230	76	78	78	82	82	79	76	72	86		
280	79	81	77	81	80	79	79	75	86	280	78	81	81	84	84	81	79	75	89		
400	81	84	80	84	83	83	82	78	89	400	80	84	84	87	87	85	82	78	92		

**VN 410 Fan: HD 500/D 2.5**

*sound pressure level $L_p$ in dB (A)					
voltage [V]	80	100	125	150	170
inlet	43	59	68	73	80
discharge	47	63	72	77	85

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200		
120	55	50	57	35	34	40	38	46	51	120	55	51	63	40	40	43	40	47	55		
180	68	68	74	59	58	58	56	56	67	180	68	69	78	62	62	61	56	57	71		
230	75	77	81	69	68	67	64	61	76	230	75	77	86	73	73	70	65	62	80		
280	79	82	85	76	75	72	70	65	81	280	79	83	90	80	80	75	71	65	85		
400	85	88	91	84	83	80	77	69	88	400	84	89	96	88	88	83	78	70	93		

**VN 411 Fan: HD 560/D 5**

*sound pressure level $L_p$ in dB (A)					
voltage [V]	80	100	125	150	170
inlet	43	61	71	77	83
discharge	47	65	75	81	87

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air!  
measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200		
120	55	50	57	35	34	39	38	45	51	120	55	51	63	39	39	43	40	47	55		
180	69	70	75	60	59	59	57	57	69	180	69	70	80	64	64	62	58	58	73		
230	78	80	84	73	72	70	68	63	79	230	77	81	89	77	77	73	69	64	83		
280	82	85	88	80	79	77	74	67	85	280	82	86	93	84	84	80	75	68	89		
400	87	91	93	87	86	83	79	70	91	400	87	92	98	91	91	86	81	71	95		

**Standard Series**  
**Size: 4**

**Sound data for Ventilator Unit VN 412 - VN 413**

**VN 412**      **Fan: HD 630/D 5**  
**Sound data: only fan!**

sound pressure level $L_p$ in dB (A)					
voltage [V]	120	180	230	280	400
<b>inlet *</b>	70	80	87	91	93
<b>discharge **</b>	54	63	71	76	77

\* sound pressure level A - measured in distance of 4m from the inlet, (room absorption 8 dB)  
\*\* sound pressure level A - at free air measured in distance of 4m from the discharge, (absorption 20 dB)

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200		
<b>120</b>	77	73	80	77	73	63	56	54	84	<b>120</b>	79	72	73	73	69	66	57	59	82		
<b>180</b>	90	83	90	87	81	73	74	62	95	<b>180</b>	84	82	84	82	77	68	72	61	90		
<b>230</b>	93	91	97	92	92	79	84	78	100	<b>230</b>	89	89	91	89	88	75	80	74	96		
<b>280</b>	96	93	100	95	96	84	87	85	104	<b>280</b>	90	96	98	92	93	80	83	83	102		
<b>400</b>	96	95	101	96	99	86	88	89	105	<b>400</b>	93	96	98	93	94	83	84	87	103		

**VN 413**      **Fan: HD 630/TD 10**

*sound pressure level $L_p$ in dB (A)					
voltage [V]	120	180	230	280	400
<b>inlet</b>	55	73	81	88	90
<b>discharge</b>	60	78	86	91	95

\* related to room absorption of 8 db (25m<sup>2</sup> Sabine), at free air! measured in distance of 3 m

inlet side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]	discharge side: sound power level in $L_w$ [dB] at mid frequency in (Hz) (at free air!)										$L_{WA}$ [dB(A)]
voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200	voltage [Volt]	63	125	250	500	1000	2000	4000	8000	total 45-11200		
<b>120</b>	64	63	69	52	51	53	51	53	63	<b>120</b>	65	65	75	57	57	56	53	55	68		
<b>180</b>	79	81	85	76	75	72	69	64	81	<b>180</b>	80	83	91	81	81	76	71	66	86		
<b>230</b>	85	88	91	85	84	80	77	69	89	<b>230</b>	86	90	97	90	90	84	79	71	94		
<b>280</b>	88	92	95	90	89	85	82	71	94	<b>280</b>	89	95	101	95	95	89	84	73	99		
<b>400</b>	91	96	98	94	93	89	86	74	98	<b>400</b>	92	98	104	99	99	94	88	76	103		