

# HE SOUND DATA

**Sound Data:** Actual sound levels will vary and be dependent on installation conditions including unit location, duct type, duct size, and duct run length.

**Testing Method:** Testing conducted per the following standards: AHRI 230 & 260, ISO 9614-1 & 9614-2. Testing conducted internally at RenewAire.

**Testing Disclaimer Note:** Hard ducted 1 m to measurement area. HE05, HE07, HE10, HE15, and HE20 data collected using INV units.

**HE05:** Standard EC Motor; 120V/1 Phase

Source	Estimated		RPM	Sound Power Level (dB)								Lw (dB)	LwA (dBA)	Sones
	Airflow (SCFM)	ESP (in. w.g.)		62.5 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz			
Case Radiated	363	0.40	4000	58	57	53	56	40	37	30	32	62	54	1.8
	276	0.25	3226	56	53	51	54	37	31	30	28	60	52	1.3
	146	0.09	1923	53	46	44	36	33	28	22	19	54	40	0.0
Room Inlet (SA)	363	0.40	4000	58	56	58	58	45	44	43	45	64	57	2.9
	276	0.25	3226	53	53	56	56	39	38	36	34	61	54	1.9
	146	0.09	1923	50	49	48	36	35	33	26	26	54	43	0.2
Room Outlet (RA)	363	0.40	4000	63	58	60	58	45	44	41	44	67	58	3.1
	276	0.25	3226	56	55	59	55	40	39	36	36	63	55	2.1
	146	0.09	1923	52	51	48	39	32	31	27	25	56	43	0.2

**HE07:** Advanced EC Motor; 120V/1 Phase

Source	Estimated		RPM	Sound Power Level (dB)								Lw (dB)	LwA (dBA)
	Airflow (SCFM)	ESP (in. w.g.)		62.5 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Case Radiated	591	0.40	3175	66	70	63	55	52	42	32	36	72	59
	485	0.25	2710	63	66	59	50	51	39	31	34	68	56
	344	0.12	2083	66	60	51	52	44	34	31	31	67	52
Room Inlet (SA)	591	0.40	3175	72	74	65	58	49	40	32	33	76	62
	485	0.25	2710	60	64	55	55	52	37	29	26	67	56
	344	0.12	2083	75	68	64	49	44	34	27	24	76	58
Room Outlet (RA)	591	0.40	3175	65	71	70	64	54	49	41	55	75	66
	485	0.25	2710	63	68	66	63	53	46	38	50	71	63
	344	0.12	2083	61	59	58	56	49	40	33	40	65	56

**HE07:** Standard EC Motor; 208–230V/1 Phase

Source	Estimated		RPM	Sound Power Level (dB)								Lw (dB)	LwA (dBA)
	Airflow (SCFM)	ESP (in. w.g.)		62.5 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Case Radiated	472	0.40	3030	63	61	60	54	41	36	30	34	66	55
	360	0.23	2459	56	57	59	46	37	31	32	28	62	52
	248	0.11	1786	55	53	56	39	34	30	29	22	60	49
Room Inlet (SA)	472	0.40	3030	61	59	57	53	36	31	28	26	64	53
	360	0.23	2459	56	46	50	41	37	29	27	21	57	45
	248	0.11	1786	56	52	52	44	36	32	21	20	59	47
Room Outlet (RA)	472	0.40	3030	62	63	69	64	44	42	37	44	72	64
	360	0.23	2459	59	59	66	55	40	37	32	33	68	59
	248	0.11	1786	55	56	60	49	36	30	22	30	63	53

**HE07:** Intermediate EC Motor; 208–230V/1 Phase

Source	Estimated		RPM	Sound Power Level (dB)								Lw (dB)	LwA (dBA)
	Airflow (SCFM)	ESP (in. w.g.)		62.5 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Case Radiated	591	0.40	3175	66	70	63	55	52	42	32	36	72	59
	485	0.25	2710	63	66	59	50	51	39	31	34	68	56
	344	0.12	2083	66	60	51	52	44	34	31	31	67	52
Room Inlet (SA)	591	0.40	3175	72	74	65	58	49	40	32	33	76	62
	485	0.25	2710	60	64	55	55	52	37	29	26	67	56
	344	0.12	2083	75	68	64	49	44	34	27	24	76	58
Room Outlet (RA)	591	0.40	3175	65	71	70	64	54	49	41	55	75	66
	485	0.25	2710	63	68	66	63	53	46	38	50	71	63
	344	0.12	2083	61	59	58	56	49	40	33	40	65	56

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## HE07: Advanced EC Motor; 208–230V/1 Phase

Source	Estimated		RPM	Sound Power Level (dB)								Lw (dB)	LwA (dBA)
	Airflow (SCFM)	ESP (in. w.g.)		62.5 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Case Radiated	658	0.40	3290	83	79	69	56	54	43	34	37	85	66
	545	0.24	2702	68	64	60	60	38	34	31	31	70	58
	393	0.14	2084	59	58	59	45	36	30	29	26	63	52
Room Inlet (SA)	658	0.40	3290	65	63	58	59	40	36	27	25	68	58
	545	0.24	2702	62	58	55	53	36	31	27	22	65	52
	393	0.14	2084	59	56	53	42	33	24	21	21	62	47
Room Outlet (RA)	658	0.40	3290	78	69	69	66	59	46	45	48	79	66
	545	0.24	2702	61	62	65	66	47	40	33	40	70	64
	393	0.14	2084	56	58	66	51	38	32	26	30	67	58

## HE10: Advanced EC Motor; 120V/1 Phase, 208–230V/1 Phase, 460V/3 Phase

Source	Estimated		RPM	Sound Power Level (dB)								Lw (dB)	LwA (dBA)
	Airflow (SCFM)	ESP (in. w.g.)		62.5 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Case Radiated	1196	0.40	2667	83	75	70	60	54	43	34	37	84	65
	902	0.24	2134	75	72	77	59	49	42	25	31	80	69
	355	0.04	1067	58	66	64	51	40	32	28	25	68	57
Room Inlet (SA)	1196	0.40	2667	67	68	76	63	53	48	40	48	77	68
	902	0.24	2134	64	66	70	61	50	44	37	43	72	63
	355	0.04	1067	60	67	62	54	44	38	32	32	69	57
Room Outlet (RA)	1196	0.40	2667	72	68	69	59	44	38	24	27	75	62
	902	0.24	2134	68	66	66	55	41	35	27	26	72	59
	355	0.04	1067	62	62	58	48	36	28	26	19	66	52

## HE10: Standard EC Motor; 208–230V/1 Phase

Source	Estimated		RPM	Sound Power Level (dB)								Lw (dB)	LwA (dBA)
	Airflow (SCFM)	ESP (in. w.g.)		62.5 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Case Radiated	1098	0.40	2763	68	68	68	65	46	41	32	29	73	64
	846	0.24	2201	66	62	66	56	37	34	26	23	70	59
	350	0.04	1105	62	58	64	48	31	28	26	18	66	56
Room Inlet (SA)	1098	0.40	2763	66	63	67	67	48	46	37	37	72	65
	846	0.24	2201	60	60	67	57	43	41	30	32	69	60
	350	0.04	1105	57	57	62	51	37	34	23	29	64	55
Room Outlet (RA)	1098	0.40	2763	71	66	64	60	43	40	26	23	73	60
	846	0.24	2201	67	62	61	52	39	34	27	19	69	55
	350	0.04	1105	61	57	57	45	35	29	22	18	63	50

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## HE15: Standard EC Motor; 115V/1 Phase

Source	Estimated		RPM	Sound Power Level (dB)								Lw (dB)	LwA (dBA)
	Airflow (SCFM)	ESP (in. w.g.)		62.5 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Case Radiated	1295	0.47	1931	67	72	69	61	42	37	30	34	75	63
	830	0.50	1369	64	66	61	52	40	38	23	20	69	56
Room Inlet (SA)	1295	0.47	1931	67	65	62	51	38	32	25	28	70	56
	830	0.50	1369	60	60	54	46	34	26	19	13	64	49
Room Outlet (RA)	1295	0.47	1931	60	70	68	58	45	40	33	38	72	62
	830	0.50	1369	59	66	59	53	46	33	26	24	68	55

## HE15: Advanced EC Motor; 208–230V/3 Phase, 460V/3 Phase

Source	Estimated		RPM	Sound Power Level (dB)								Lw (dB)	LwA (dBA)
	Airflow (SCFM)	ESP (in. w.g.)		62.5 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Case Radiated	1295	1.50	2384	65	69	73	58	38	35	26	28	75	65
	1295	0.50	2060	61	70	68	55	36	31	22	22	72	61
	830	0.50	1570	57	65	58	47	31	25	16	9	67	53
Room Inlet (SA)	1295	1.50	2384	68	61	67	53	35	32	23	22	71	59
	1295	0.50	2060	67	61	59	49	37	30	19	20	68	53
	830	0.50	1570	53	59	53	40	28	22	12	9	61	47
Room Outlet (RA)	1295	1.50	2384	56	65	69	58	39	36	27	33	70	61
	1295	0.50	2060	54	66	65	56	36	33	25	30	69	59
	830	0.50	1570	52	63	58	48	31	28	19	21	65	52

## HE20: Standard EC Motor; 208–230V/1 Phase

Source	Estimated		RPM	Sound Power Level (dB)								Lw (dB)	LwA (dBA)
	Airflow (SCFM)	ESP (in. w.g.)		62.5 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Case Radiated	1870	0.50	2452	63	69	75	61	46	39	31	37	76	67
	1125	0.50	1715	61	76	61	50	35	32	23	22	76	60
Room Inlet (SA)	1870	0.50	2452	78	63	66	49	43	37	22	28	79	59
	1125	0.50	1715	65	61	50	44	33	26	16	13	66	48
Room Outlet (RA)	1870	0.50	2452	52	54	60	59	46	40	31	40	64	58
	1125	0.50	1715	45	60	48	48	35	32	23	25	61	48

## HE20: Advanced EC Motor; 208–230V/3 Phase, 460V/3 Phase

Source	Estimated		RPM	Sound Power Level (dB)								Lw (dB)	LwA (dBA)
	Airflow (SCFM)	ESP (in. w.g.)		62.5 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		
Case Radiated	1870	1.50	2711	66	62	67	61	49	40	31	32	71	62
	1870	0.50	2403	67	66	66	59	46	39	28	28	71	61
	1125	0.50	1679	55	71	57	45	38	29	19	15	72	56
Room Inlet (SA)	1870	1.50	2711	82	63	62	50	39	35	26	30	82	58
	1870	0.50	2403	53	62	65	54	41	35	29	38	67	58
	1125	0.50	1679	60	65	53	36	34	25	16	12	67	51
Room Outlet (RA)	1870	1.50	2711	54	60	68	48	44	40	31	38	69	60
	1870	0.50	2403	50	53	56	60	45	40	31	38	62	58
	1125	0.50	1679	51	68	56	48	28	24	21	22	69	54