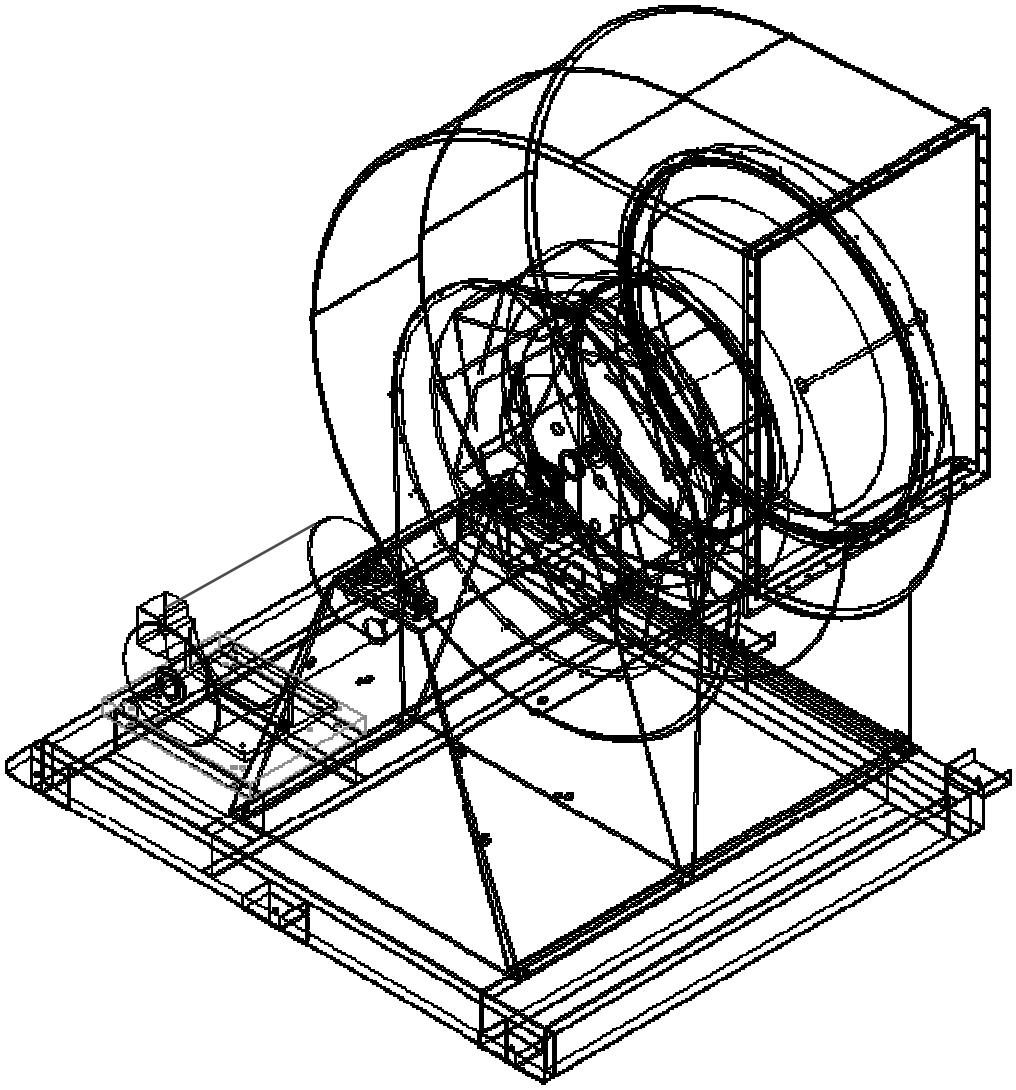
Universal Fan & Blower Ltd.

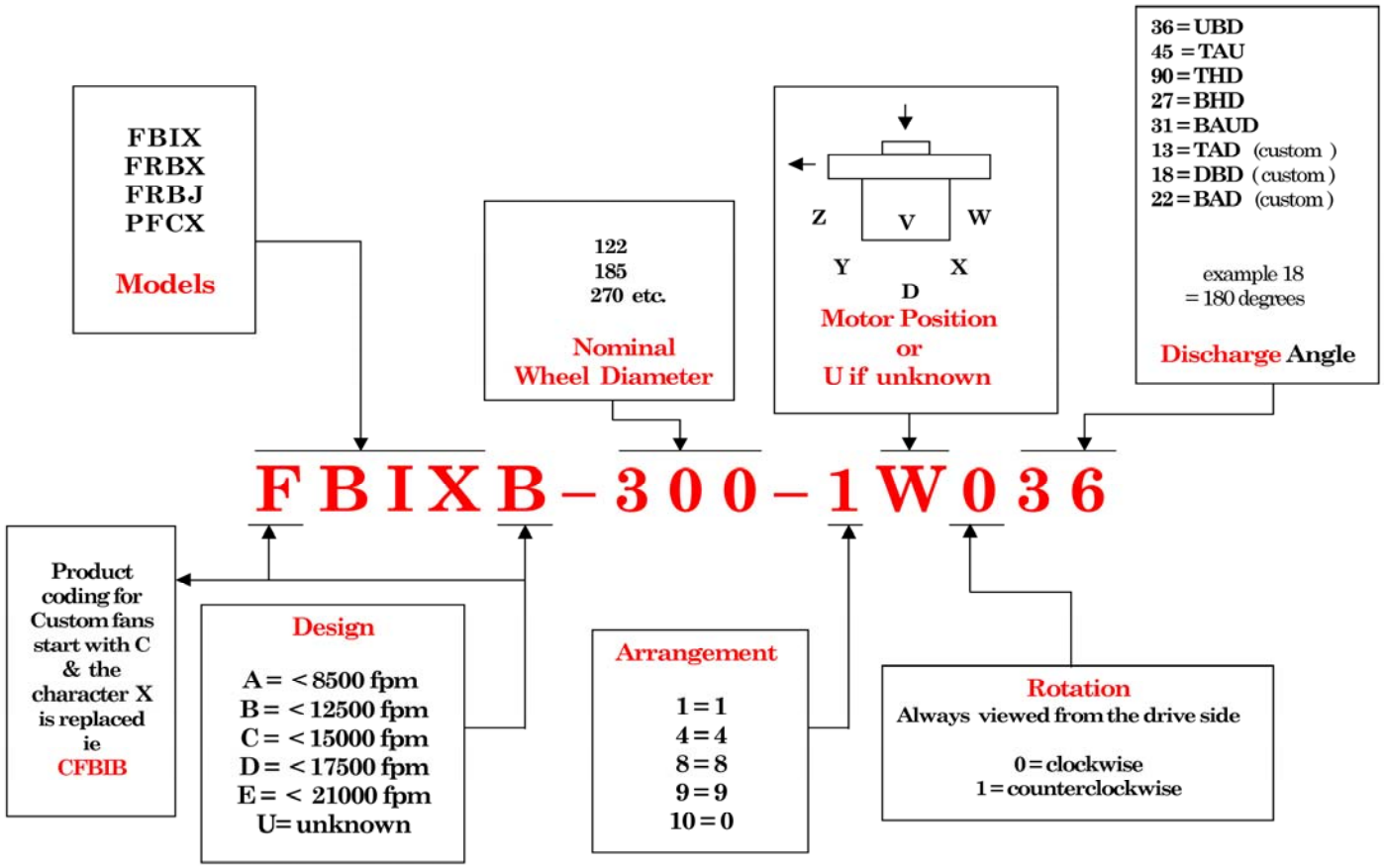
The Composite Fan Company

PRINT-007-MI
February 2012



Model FBIX
Composite FRP Fans
Sound Tables

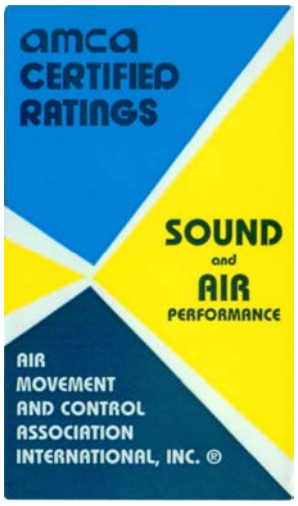
Product Coding ~ Centrifugal Fans



Universal Fan & Blower Ltd. certifies that the FBIX type fans shown herein are licensed to bear the AMCA seal.

The ratings are based upon tests and procedures performed in accordance with AMCA publications 211 and 311 and comply with the requirements of the AMCA certified ratings program.

Refer to bulletin:
PRINT-003-MI dated Feb 2012
for the FBIX Air Ratings



Sound Performance Data Outlet Area = 0.860 sq.ft. Inlet Area = 0.922 sq.ft. Wheel Diameter = 12 1/4 inches

FBIX-122

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
5200	16	775	99	107	110	107	101	96	95	90
5200	14	2405	99	108	111	109	103	97	96	90
5200	10	3299	100	109	112	111	106	100	97	90
5200	6	4125	102	110	113	111	107	101	100	92
5200	2	4648	104	112	114	112	107	103	103	94
4500	12	644	97	105	106	103	96	93	92	85
4500	10	2272	97	105	107	105	98	95	92	85
4500	8	2748	98	106	108	106	101	96	93	85
4500	6	3235	99	107	109	107	103	97	95	86
4500	2	3954	101	109	110	107	103	99	99	88
4000	9	1227	95	103	103	100	92	92	89	81
4000	8	1981	95	103	104	101	94	93	89	81
4000	6	2518	96	104	105	103	98	94	90	81
4000	4	3076	97	105	106	104	99	96	93	82
4000	2	3449	99	107	106	103	99	97	96	83
3500	7	936	92	99	99	95	87	88	84	77
3500	6	1787	93	100	100	97	88	89	85	77
3500	4	2383	94	101	102	100	91	91	86	77
3500	3	2708	95	102	102	100	91	92	88	78
3500	1	3112	97	103	102	100	93	94	91	80
2500	3.75	226	86	89	88	79	81	79	73	67
2500	3	1309	87	90	90	83	83	80	74	67
2500	2	1723	88	92	92	87	86	82	74	68
2500	1.5	1945	89	92	92	86	86	84	75	69
2500	0.5	2226	91	94	92	87	88	86	77	71
1800	1.8	603	80	80	74	74	74	70	63	58
1800	1.5	980	80	81	76	76	75	71	63	58
1800	1	1266	81	83	79	80	76	72	63	58
1800	0.5	1517	83	83	78	80	79	76	65	61

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet. Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 0.860 sq.ft. Inlet Area = 0.922 sq.ft. Wheel Diameter = 13 1/2 inches

FBIX-135

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
4900	16	2375	101	109	111	109	102	98	97	91
4900	10	4341	102	111	113	112	108	100	99	91
4900	8	4884	103	111	114	112	108	101	100	92
4900	4	5603	105	113	114	112	107	103	103	94
4900	2	5884	106	114	115	112	108	103	104	95
4200	12	1779	98	107	107	104	97	96	93	86
4200	8	3547	100	108	109	107	102	98	94	86
4200	6	4150	100	109	109	108	103	99	96	86
4200	4	4611	102	110	110	107	103	100	99	88
4200	2	4958	103	111	110	108	103	101	100	88
3500	8	1901	95	102	102	99	90	91	87	80
3500	6	2826	96	103	104	101	92	93	88	80
3500	4	3516	97	104	104	102	94	95	90	81
3500	2	4010	99	106	105	102	95	97	93	83
3500	1	4207	100	107	105	102	96	97	94	83
3000	6	1451	93	98	97	93	89	87	82	76
3000	4	2562	94	99	100	97	93	89	83	76
3000	3	2989	95	100	100	97	94	91	84	77
3000	2	3305	96	101	100	97	94	92	86	78
3000	1	3546	97	102	100	97	95	93	88	79
2500	4	1473	90	93	92	84	85	83	76	70
2500	3	2043	90	94	94	88	87	84	77	70
2500	2	2530	92	95	95	89	89	86	78	72
2500	1	2870	93	96	95	89	90	89	80	73
2500	0.5	3007	94	97	95	90	91	89	80	74
1800	2.2	773	83	83	77	77	76	73	66	61
1800	1.5	1502	84	85	81	82	78	74	66	61
1800	1	1843	85	86	82	83	80	76	67	62
1800	0.5	2074	86	86	82	83	82	79	68	65

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet. Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 1.292 sq.ft. Inlet Area = 1.332 sq.ft. Wheel Diameter = 15.0 inches

FBIX-150

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
4400	16	2845	103	110	111	108	102	99	97	90
4400	12	4797	103	111	113	111	105	101	98	90
4400	8	6005	105	113	114	112	107	103	101	91
4400	4	6898	106	114	114	111	107	104	104	93
4400	2	7246	107	115	115	112	108	105	105	94
3800	12	2372	100	107	107	104	97	97	93	86
3800	10	3806	101	108	108	105	99	98	94	86
3800	6	5174	102	110	110	108	102	100	96	86
3800	4	5733	103	111	109	107	102	101	99	88
3800	2	6158	104	112	110	107	103	102	100	88
3200	8	2674	97	103	102	99	92	92	88	81
3200	6	3611	98	104	104	102	93	94	88	81
3200	4	4460	99	105	105	102	95	96	90	82
3200	2	5046	101	106	105	102	97	98	93	83
3200	1	5283	102	107	106	103	97	98	94	84
2800	6	2455	95	99	99	93	91	89	83	77
2800	4	3418	96	101	101	98	95	91	84	77
2800	3	3928	97	101	101	97	95	92	86	78
2800	2	4278	98	102	101	97	95	94	87	79
2800	1	4561	99	103	101	98	96	95	88	80
2400	5	1008	92	94	93	85	86	84	78	72
2400	4	2397	93	96	95	88	88	85	78	72
2400	3	2895	93	97	97	92	90	86	78	72
2400	2	3461	95	97	97	91	91	89	80	74
2400	1	3825	96	98	97	92	92	91	82	76
1800	2.5	1551	86	87	81	81	80	77	69	64
1800	2	1968	87	88	84	84	81	77	69	64
1800	1	2664	89	89	85	86	84	81	71	66
1800	0.5	2895	90	90	86	86	85	83	72	68

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet. Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 1.570 sq.ft. Inlet Area = 1.647 sq.ft. Wheel Diameter = 16 1/2 inches

FBIX-165

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
4000	16	3442	104	111	111	108	101	101	98	90
4000	12	5805	105	112	112	110	105	102	99	90
4000	8	7265	106	113	113	111	107	104	101	91
4000	4	8347	107	115	114	111	107	106	105	92
4000	2	8768	108	116	115	111	108	107	105	93
3600	13	3038	102	109	108	104	97	98	94	87
3600	10	5127	103	110	109	107	100	99	95	87
3600	6	6723	104	111	110	108	102	102	98	88
3600	4	7320	105	112	110	108	102	103	100	89
3600	2	7804	106	113	111	108	103	104	101	90
3200	10	3157	100	106	105	101	95	95	91	84
3200	8	4517	101	106	106	103	96	96	91	84
3200	6	5359	101	107	107	105	97	97	92	84
3200	4	6245	103	108	107	105	98	99	94	85
3200	2	6828	104	109	108	105	100	101	96	86
2800	8	2101	98	102	100	95	93	91	86	80
2800	6	4010	98	103	103	98	96	93	86	80
2800	4	5043	100	104	104	100	98	95	88	81
2800	2	5830	101	105	104	100	98	97	90	83
2800	1	6132	102	106	104	100	99	98	91	83
2300	5	2559	94	97	96	89	89	87	80	74
2300	4	3320	95	98	97	92	91	87	80	74
2300	3	3925	96	99	99	94	92	89	80	74
2300	2	4519	97	99	98	94	93	91	82	76
2300	1	4920	98	100	98	94	94	93	83	78
1600	2.5	1578	86	86	78	81	80	75	69	64
1600	2	2259	87	88	81	83	81	76	69	64
1600	1	3123	88	89	84	86	84	79	70	66
1600	0.5	3414	89	89	84	86	86	81	71	68

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet.
Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 1.930 sq.ft. Inlet Area = 1.969 sq.ft. Wheel Diameter = 18 1/4 inches

FBIX-182

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
3600	16	3370	120	123	114	107	102	100	94	87
3600	12	8721	123	122	112	106	96	95	91	86
3600	8	10740	121	119	110	107	99	98	95	89
3600	4	12135	126	124	115	111	103	101	96	91
3600	2	12711	130	127	118	114	105	103	97	92
3100	12	2799	117	118	108	103	100	95	90	82
3100	10	6112	120	117	107	102	95	93	88	82
3100	6	9217	118	113	105	103	96	94	90	84
3100	4	10069	122	116	108	106	99	96	92	86
3100	2	10777	126	119	112	109	102	98	92	87
2600	8	2801	115	112	100	98	95	89	84	76
2600	6	6549	118	108	100	97	89	86	82	76
2600	4	7851	115	105	99	99	93	90	86	79
2600	2	8800	121	110	105	103	97	92	87	81
2600	1	9196	124	113	108	105	99	93	88	82
2100	5	3113	108	102	92	92	88	82	77	69
2100	4	5191	109	100	92	90	84	80	76	69
2100	3	6072	107	98	92	92	86	83	78	71
2100	2	6725	109	100	95	94	89	85	80	73
2100	1	7260	113	104	98	97	92	86	81	74
1600	3	1795	99	91	86	85	80	75	68	60
1600	2.5	3622	98	90	85	82	77	73	67	60
1600	2	4368	96	89	85	82	78	74	68	62
1600	1.5	4844	94	88	87	84	80	77	71	64
1600	1	5245	98	92	89	87	82	78	72	65
1200	1.8	1080	88	80	80	78	72	67	58	50
1200	1.5	2359	86	80	79	74	70	65	58	50
1200	1	3444	83	80	79	74	71	67	60	54
1200	0.5	3994	86	84	83	79	74	69	63	55

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet.
Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 2.313 sq.ft. Inlet Area = 2.522 sq.ft. Wheel Diameter = 20.0 inches

FBIX-200

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
3300	16	4185	122	123	113	107	103	100	94	87
3300	12	10619	125	121	112	106	97	95	92	86
3300	8	12992	122	118	110	107	100	99	95	89
3300	4	14653	128	123	115	112	104	102	97	91
3300	2	15341	131	126	118	114	106	103	97	92
2900	13	3108	119	119	108	102	102	96	91	83
2900	10	8445	122	116	107	102	97	93	89	82
2900	6	11512	120	112	105	103	99	96	92	85
2900	4	12489	124	116	109	106	102	97	93	86
2900	2	13308	128	119	113	109	104	99	93	88
2500	10	2318	115	115	102	100	100	92	86	77
2500	8	6068	118	112	102	99	94	89	85	77
2500	6	8878	118	108	101	99	92	89	85	78
2500	4	10200	117	107	102	101	96	92	88	81
2500	2	11240	123	112	107	105	99	94	89	83
2100	6	4119	111	105	95	95	90	85	79	72
2100	4	7667	110	102	95	94	88	85	80	73
2100	3	8442	109	101	96	96	90	87	82	75
2100	2	9103	113	104	99	98	93	88	83	76
2100	1	9663	117	108	102	101	95	89	84	77
1600	4	1647	103	95	89	90	84	79	71	63
1600	3	4774	101	93	88	85	80	76	70	63
1600	2	6182	98	92	89	86	82	79	73	66
1600	1.5	6652	99	94	91	88	84	80	74	67
1600	1	7060	102	97	93	91	85	81	75	68
1200	2	1909	91	83	83	80	74	69	61	53
1200	1.5	4050	88	83	81	75	72	68	61	55
1200	1	4798	85	83	84	79	75	71	64	57
1200	0.5	5357	91	89	87	82	77	72	66	58

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet.
Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 2.848 sq.ft. Inlet Area = 3.012 sq.ft. Wheel Diameter = 22 1/4 inches

FBIX-222

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
2950	16	4975	123	122	111	106	105	100	94	86
2950	12	12924	126	120	111	105	100	96	92	86
2950	8	15940	123	117	109	107	103	99	95	89
2950	4	18017	129	121	115	111	107	102	97	91
2950	2	18873	132	124	118	113	109	103	97	92
2550	12	4249	120	118	105	104	102	95	90	81
2550	10	9255	122	115	105	103	97	93	88	81
2550	6	13764	121	111	105	104	98	95	91	84
2550	4	15022	124	113	108	107	101	97	92	86
2550	2	16070	128	117	112	110	104	98	93	87
2050	8	3080	113	109	98	99	95	89	83	74
2050	6	8617	114	106	97	96	90	86	81	74
2050	4	10960	112	104	98	97	92	89	84	77
2050	2	12476	116	108	102	101	96	91	86	79
2050	1	13095	119	111	105	104	98	92	86	80
1750	6	2349	109	102	94	95	91	85	77	69
1750	4	8053	108	100	93	90	85	81	76	70
1750	3	9270	105	98	94	92	88	84	79	72
1750	2	10211	107	101	97	95	90	86	80	73
1750	1	10987	111	105	100	98	92	87	81	74
1350	3	4030	100	90	89	85	80	76	68	60
1350	2.5	5947	97	90	88	82	78	74	68	60
1350	2	6854	95	89	89	83	80	76	70	63
1350	1.5	7515	94	89	91	86	82	78	71	64
1350	1	8081	98	93	93	88	83	79	73	65
1000	1.8	1804	79	83	82	78	73	66	58	50
1000	1.5	3860	79	82	80	75	71	65	58	50
1000	1	5260	78	82	80	76	73	68	61	54
1000	0.5	6053	83	87	85	80	75	70	63	55

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet. Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 3.451 sq.ft. Inlet Area = 3.687 sq.ft. Wheel Diameter = 24 1/2 inches

FBIX-245

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
2700	16	6387	124	123	111	107	106	99	94	86
2700	12	16042	127	119	110	106	100	96	92	86
2700	8	19566	125	116	109	108	103	100	96	89
2700	4	22049	130	120	115	112	107	102	97	91
2700	2	23078	134	123	118	114	109	103	98	92
2400	13	5193	121	119	107	105	103	96	91	82
2400	10	13414	123	115	106	104	97	93	89	82
2400	6	17644	121	112	106	106	100	97	92	85
2400	4	19072	125	115	110	108	102	98	93	87
2400	2	20277	129	118	114	111	105	99	94	88
2100	10	4475	117	113	102	102	99	92	86	78
2100	6	14096	117	108	102	100	94	91	86	80
2100	4	15948	117	109	103	103	97	94	89	82
2100	2	17435	122	113	107	106	100	95	90	83
2100	1	18083	124	115	109	108	102	96	90	84
1700	6	5134	111	103	96	95	91	85	79	71
1700	4	11322	108	101	96	93	88	85	79	73
1700	3	12509	107	101	98	95	91	87	82	75
1700	2	13516	110	104	100	98	93	88	83	76
1700	1	14366	114	108	103	100	95	89	84	77
1300	4	2366	104	93	92	92	84	79	70	62
1300	3	7022	100	93	91	85	81	77	70	62
1300	2	9205	96	92	92	86	83	79	72	65
1300	1.5	9917	97	94	94	88	84	80	74	66
1300	1	10534	100	97	96	90	86	81	75	67
900	1.8	2047	81	83	82	78	73	66	58	50
900	1.5	4441	81	83	80	75	71	65	58	50
900	1	6281	80	83	80	76	72	67	60	54
900	0.5	7258	85	87	85	80	75	69	63	55

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet. Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 4.193 sq.ft. Inlet Area = 4.277 sq.ft. Wheel Diameter = 27.0 inches

FBIX-270

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
2450	15	16745	105	107	103	100	94	91	87	85
2450	10	22279	108	110	106	103	98	96	90	86
2450	6	24965	111	113	108	105	101	101	94	88
2450	4	26079	112	114	109	106	103	102	95	89
2450	2	27139	112	114	109	106	104	104	97	90
2150	11	15642	103	103	101	92	92	88	84	82
2150	8	19256	105	106	103	95	95	92	86	83
2150	6	20955	107	107	104	96	97	94	88	84
2150	4	22310	109	109	106	98	100	97	90	85
2150	2	23541	110	110	106	99	101	99	92	86
1800	8	12536	99	96	97	88	87	82	79	78
1800	6	15616	101	99	99	91	90	86	81	78
1800	4	17721	104	101	101	93	94	89	83	79
1800	2	19277	106	103	103	95	97	93	86	81
1400	1	15189	101	95	97	91	92	85	78	74
1500	5	11578	97	91	93	85	84	78	75	74
1500	4	13276	99	93	94	87	86	80	76	74
1500	3	14535	101	95	96	89	89	83	77	74
1500	2	15517	103	96	97	91	93	86	79	75
1500	1	16401	103	97	97	92	94	88	80	76
1250	4	8045	90	86	87	79	76	72	70	70
1250	3	10633	92	89	89	82	80	75	71	70
1250	2	12219	95	91	91	86	84	78	73	70
1250	1	13349	97	92	93	88	88	81	75	70
1250	0.5	13867	97	93	93	89	89	82	76	71
800	1.6	5464	74	79	71	69	64	61	60	60
800	1.2	6896	77	81	74	72	67	62	60	60
800	0.8	7857	79	83	76	76	70	64	61	59
600	0.4	6018	73	74	70	69	62	57	54	52

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet. Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 5.175 sq.ft. Inlet Area = 5.413 sq.ft. Wheel Diameter = 30.0 inches

FBIX-300

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
2200	15	19998	106	106	104	96	94	91	87	85
2200	10	27068	109	109	107	100	99	96	90	86
2200	6	30412	112	112	109	102	102	100	93	88
2200	4	31789	113	113	109	103	104	102	95	89
2200	2	33097	113	113	110	104	105	103	96	90
1900	11	17825	103	101	101	92	91	87	83	82
1900	8	22676	106	104	103	95	95	91	85	83
1900	6	24927	108	106	105	97	97	93	87	84
1900	4	26653	110	107	106	98	100	96	89	84
1900	2	28204	111	108	107	99	102	98	91	86
1600	8	14233	100	95	98	88	86	82	79	78
1600	6	18545	102	98	100	91	90	85	80	79
1600	4	21271	105	100	102	94	94	88	82	79
1600	2	23225	107	102	103	96	98	92	85	80
1600	1	24122	108	103	103	97	99	94	86	81
1300	5	12669	95	91	92	84	81	77	74	74
1300	4	14983	96	93	94	86	84	79	75	74
1300	3	16784	98	95	95	89	87	81	76	74
1300	2	18086	101	96	97	91	91	84	78	74
1300	1	19227	102	97	97	92	93	86	79	75
1000	3	9586	86	87	82	77	74	70	68	68
1000	2	12453	89	89	86	82	78	73	69	67
1000	1.5	13401	91	90	87	84	81	74	70	68
1000	1	14192	92	92	88	87	83	76	71	67
1000	0.5	14921	93	92	89	88	85	78	72	68
700	1.5	6516	75	79	70	68	63	61	61	61
700	1	8653	79	81	74	73	67	62	61	61
700	0.5	9913	81	84	77	79	72	65	61	59
700	0.25	10434	82	84	79	80	74	67	62	58

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet. Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 6.263 sq.ft. Inlet Area = 6.587 sq.ft. Wheel Diameter = 33.0 inches

FBIX-330

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
2000	15	24197	107	105	105	95	95	91	87	86
2000	10	32752	110	109	108	99	100	96	90	87
2000	6	36799	113	111	110	102	103	100	93	89
2000	4	38465	114	112	110	103	105	102	95	89
2000	2	40047	115	113	111	103	106	103	96	90
1700	11	19637	104	100	102	92	91	86	83	83
1700	8	26575	106	103	104	95	95	90	85	83
1700	6	29463	108	105	105	97	98	92	87	84
1700	4	31616	111	106	107	99	101	95	89	84
1700	2	33529	112	107	107	100	103	98	90	85
1400	7	18207	100	95	98	89	87	82	79	79
1400	6	20601	101	97	99	90	89	83	79	79
1400	4	24363	104	99	101	94	93	87	81	79
1400	2	26879	107	101	103	96	97	90	84	79
1400	1	28011	107	102	103	97	99	92	85	80
1100	4	15330	93	92	90	84	80	76	74	73
1100	3	18072	95	93	92	87	84	78	74	73
1100	2	19945	97	95	94	90	87	81	76	73
1100	1.5	20724	98	96	95	91	89	82	76	73
1100	1	21461	99	96	95	92	90	83	77	73
850	2.5	11406	84	87	80	77	72	69	68	68
850	2	13287	86	88	82	80	75	70	68	68
850	1.5	14732	88	90	84	83	77	72	68	66
850	1	15808	89	92	86	86	80	74	69	67
850	0.5	16765	90	92	87	88	83	75	70	66
600	1.3	7705	76	77	70	67	62	60	60	60
600	1	9362	78	78	72	70	65	61	60	60
600	0.5	11154	81	82	77	76	69	64	60	58
600	0.25	11832	82	82	79	78	71	65	61	56

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet.
Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 7.653 sq.ft. Inlet Area = 8.805 sq.ft. Wheel Diameter = 36 1/2 inches

FBIX-365

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
1700	14	26378	106	107	105	100	99	94	90	85
1700	10	36140	109	109	106	102	102	99	94	87
1700	6	42546	111	111	108	104	104	103	98	90
1700	2	47323	113	113	111	105	106	106	101	92
1700	1	48440	113	114	111	105	107	107	101	92
1500	11	21980	104	103	102	101	95	91	86	81
1500	8	31444	106	105	103	103	99	95	90	83
1500	5	37044	108	107	105	105	101	99	93	86
1500	2	41189	110	109	107	106	104	102	96	88
1500	1	42462	111	110	108	107	104	103	96	88
1300	8	21615	101	99	100	97	91	88	83	77
1300	6	27273	104	101	101	98	95	92	85	79
1300	4	31665	106	102	103	100	98	95	88	81
1300	2	34950	107	104	104	101	100	98	90	83
1300	1	36437	108	105	105	102	101	99	91	84
1100	5	21145	100	94	98	92	88	85	79	73
1100	4	23919	101	96	100	94	92	88	80	75
1100	3	26495	103	97	101	95	94	90	82	76
1100	2	28529	104	98	102	96	96	93	84	77
1100	1	30337	105	99	103	96	97	94	85	78
900	3	18463	94	93	93	88	85	80	74	68
900	2	21700	96	95	95	90	89	84	76	69
900	1.5	22964	97	95	95	91	90	85	77	70
900	1	24105	98	96	96	92	91	87	78	71
900	0.5	25182	99	97	97	93	93	88	79	72
700	2	13566	84	87	85	80	77	71	66	60
700	1.5	15752	86	88	86	83	80	74	67	61
700	1	17574	87	90	87	85	83	76	69	62
700	0.5	19043	89	91	89	87	85	78	70	63

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet.Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 9.302 sq.ft. Inlet Area = 9.853 sq.ft. Wheel Diameter = 40 1/4 inches

FBIX-402

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
1650	16	35079	108	109	107	102	101	96	92	87
1650	12	46121	111	111	109	104	104	101	96	89
1650	8	53838	113	113	110	106	106	104	99	91
1650	4	59584	114	114	112	107	108	107	102	93
1650	2	62174	115	115	113	107	109	108	103	94
1400	11	32813	106	104	104	102	97	93	88	83
1400	8	40700	108	106	106	104	100	97	91	85
1400	6	45217	110	107	107	105	102	100	93	86
1400	4	48766	111	108	108	106	104	102	95	87
1400	2	51908	112	110	109	107	105	104	96	89
1150	7	28656	103	99	102	97	92	89	83	77
1150	6	31652	104	99	103	97	94	91	84	78
1150	4	37257	106	101	104	99	98	95	87	80
1150	2	41420	108	103	106	101	100	98	89	82
1150	1	43281	109	104	107	101	102	99	90	83
900	4	23576	97	96	95	90	86	82	76	71
900	3	27328	99	97	97	92	90	85	78	72
900	2	30438	100	98	98	94	93	88	80	73
900	1	32957	101	100	99	95	95	90	81	74
900	0.5	34134	102	100	100	96	96	91	82	75
700	2.5	17940	87	90	88	83	79	74	68	63
700	2	20350	88	91	89	85	82	76	70	64
700	1.5	22608	90	92	90	87	85	78	71	65
700	1	24383	91	93	91	89	87	80	72	65
700	0.5	25954	92	95	92	90	89	81	74	66
500	1.5	7187	79	82	76	71	68	62	58	53
500	1	14678	81	84	79	77	73	65	60	54
500	0.5	17463	83	87	82	81	77	69	62	55
500	0.25	18560	85	88	82	83	79	70	63	55

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet. Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 11.388 sq.ft. Inlet Area = 11.795 sq.ft. Wheel Diameter = 44 1/2 inches

FBIX-445

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
1450	15	42584	109	108	107	106	100	96	92	87
1450	12	53079	111	109	109	107	103	100	94	88
1450	8	63012	113	111	110	109	106	104	97	90
1450	4	70386	115	113	112	111	108	107	100	92
1450	2	73657	116	114	113	111	109	108	101	93
1300	12	38673	107	105	106	103	97	93	89	83
1300	8	52344	111	107	108	105	102	99	92	86
1300	6	57480	112	108	109	106	104	101	94	87
1300	4	61613	113	109	110	107	105	103	96	88
1300	2	65333	114	111	111	108	107	105	97	89
1100	8	36334	105	100	104	98	93	90	84	79
1100	6	43344	107	102	106	100	98	94	86	81
1100	4	49406	109	103	107	101	101	97	89	82
1100	2	54059	111	105	109	102	103	100	91	84
1100	1	56197	111	106	109	103	104	101	91	84
900	5	31395	100	99	98	93	89	85	79	74
900	4	35534	101	100	99	95	92	87	80	75
900	3	39386	102	101	101	96	95	90	82	76
900	2	42424	104	102	102	97	96	92	83	76
900	1	45122	105	103	103	98	98	93	85	77
700	3	24553	91	93	91	86	83	77	72	66
700	2.5	27197	92	94	92	88	85	79	73	67
700	2	29806	93	95	93	90	87	81	74	68
700	1.5	31912	94	96	93	91	89	82	75	68
700	1	33744	94	97	94	93	90	84	76	69
500	1.6	16987	83	86	80	76	73	67	61	56
500	1.2	20006	84	88	82	81	76	69	63	57
500	0.8	22604	86	89	84	83	79	71	64	58
500	0.4	24636	88	91	85	85	81	73	65	58

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet. Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 13.791 sq.ft. Inlet Area = 13.911 sq.ft. Wheel Diameter = 49.0 inches

FBIX-490

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
1350	16	50006	111	109	109	107	101	97	92	87
1350	12	67796	113	110	111	108	105	101	95	89
1350	8	79324	115	112	112	110	108	105	98	91
1350	4	87895	117	114	114	111	110	108	101	93
1350	2	91750	118	115	115	112	111	109	101	94
1150	11	48630	109	104	108	102	97	94	88	83
1150	8	60319	111	106	109	104	102	98	91	85
1150	6	67013	112	107	110	105	104	100	92	86
1150	4	72273	114	108	111	106	106	103	94	87
1150	2	76930	115	110	113	107	107	104	95	88
1000	8	44183	105	102	104	98	94	90	84	79
1000	6	52660	107	103	106	100	98	94	86	81
1000	4	59990	109	105	107	102	101	97	89	82
1000	2	65622	111	106	109	103	103	99	90	83
1000	1	68212	111	107	109	104	104	100	91	84
800	5	36089	99	99	97	92	88	84	78	73
800	4	41282	100	100	99	94	91	86	80	74
800	3	46211	102	102	100	96	94	88	81	75
800	2	50050	103	103	101	98	96	90	82	76
800	1	53412	104	104	102	99	98	92	84	77
600	3	25304	89	93	88	83	80	74	69	64
600	2.5	29265	90	94	89	86	82	76	70	65
600	2	32709	91	95	90	89	85	78	71	65
600	1.5	35683	92	96	91	90	87	79	73	66
600	1	38118	93	97	92	92	89	81	74	67
400	1.2	18602	83	83	78	74	69	63	58	53
400	0.8	22666	85	84	81	79	73	66	59	53
400	0.6	24300	86	85	82	80	74	67	60	54
400	0.4	25715	87	86	83	82	76	68	61	54

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet. Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 16.928 sq.ft. Inlet Area = 17.723 sq.ft. Wheel Diameter = 54 1/4 inches

FBIX-542

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
1225	16	64058	112	109	111	107	101	98	93	88
1225	12	83900	115	111	113	109	105	102	95	89
1225	8	97898	117	112	114	110	109	106	98	91
1225	4	108326	118	114	116	112	111	108	100	93
1225	2	113028	119	115	117	112	112	110	101	94
1000	10	58776	108	105	107	101	97	93	87	82
1000	8	68474	110	106	108	103	100	96	89	83
1000	6	77410	111	107	110	104	103	99	91	85
1000	4	84372	113	108	111	106	105	101	92	86
1000	2	90364	114	110	112	107	107	103	94	87
850	7	51531	104	103	102	97	93	89	83	78
850	6	57045	105	104	103	98	95	90	84	78
850	4	67296	107	106	105	101	99	94	86	80
850	2	74907	108	108	106	103	102	97	88	81
850	1	78304	109	108	107	104	103	98	89	82
700	5	40123	96	99	96	91	87	82	77	72
700	4	47419	97	100	97	94	90	84	78	73
700	3	53848	99	101	99	96	93	87	80	74
700	2	58878	100	102	100	98	95	89	81	74
700	1	63173	102	104	101	99	97	90	82	75
550	3	32616	91	95	89	84	81	75	70	65
550	2.5	37010	92	96	90	87	83	77	71	66
550	2	41177	93	97	91	90	86	78	72	66
550	1.5	44671	94	98	92	92	88	80	73	67
550	1	47585	95	99	93	93	90	81	74	67
400	1.6	23510	86	85	80	76	71	66	61	56
400	1.2	28313	87	87	83	80	74	68	62	56
400	0.8	32431	89	88	85	83	77	70	63	57
400	0.4	35566	90	90	87	86	80	71	64	57

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet. Ratings include the effects of duct end correction.

Sound Performance Data Outlet Area = 20.692 sq.ft. Inlet Area = 21.65 sq.ft. Wheel Diameter = 60 inches

FBIX-600

RPM	SP	CFM	Octave Band							
			1	2	3	4	5	6	7	8
1100	15	86082	114	109	113	107	102	99	93	88
1100	12	101178	116	110	114	108	105	102	95	89
1100	9	114722	117	111	115	109	109	105	97	90
1100	4	131435	120	114	118	111	112	109	100	93
1100	2	137230	120	115	118	112	113	110	100	93
950	11	75833	110	108	109	103	98	95	89	84
950	9	87124	111	109	110	104	101	97	90	85
950	7	97711	113	110	111	106	104	100	92	86
950	4	109948	114	111	112	108	107	103	94	87
950	1	120133	116	113	114	109	109	105	96	89
800	8	61906	105	105	103	98	93	89	84	79
800	6	75777	106	107	105	101	98	92	86	80
800	4	87343	108	108	106	103	101	95	88	81
800	2	96057	110	110	108	105	104	98	89	82
800	1	100030	111	111	108	105	105	99	90	83
650	5	53375	96	101	97	92	89	83	78	73
650	4	61261	98	102	98	95	92	85	79	74
650	3	68737	99	103	100	98	95	87	81	74
650	2	74553	100	104	101	99	97	89	82	75
650	1	79627	101	106	102	101	99	91	83	76
500	3	40544	92	95	89	85	81	75	70	65
500	2	50851	94	97	92	91	86	78	72	66
500	1.5	55065	95	98	93	92	88	80	73	67
500	1	58597	96	99	94	94	90	81	74	67
500	0.5	61832	98	100	95	95	91	82	75	67
400	2	30953	89	88	83	78	74	69	64	59
400	1.5	37888	90	90	85	83	77	71	65	59
400	1	43671	92	91	88	86	80	73	66	60
400	0.5	48029	93	93	90	89	83	74	67	60

The sound power level ratings shown are in decibels,referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type D : ducted inlet,ducted outlet. Ratings include the effects of duct end correction.

Engineered Product Specification

GENERAL

Fans shall be size_____ as manufactured by Universal Fan & Blower Ltd of Bloomfield, Ontario. Canada K0K1G0
All surfaces in contact with the contaminated airstream will be solid corrosion resistant FRP composite and all fasteners shall be 316ss, fully encapsulated in FRP.
Fans shall be AMCA arrangement ___ (Option 1, 8, 9, or 10) with rotation and discharge as shown on the drawings (Option is to state actual rotation and discharge)

PERFORMANCE

Fan performance ratings shall be based on tests made in accordance with AMCA standard 210 and the fan shall be licensed to bear the AMCA Certified Ratings Seal for Air Performance. Only AMCA certified fans will be accepted with no exceptions.
Fan shall be capable of delivering ____ CFM at ____ inches WG at _____ density and brake horse power shall not exceed ____ BHP (Option is to change units of measure)

SOUND

Fan sound ratings shall be based on tests made in accordance with AMCA standard 300 and 301 and the fan shall be licensed to bear the AMCA Certified Ratings Seal for Sound. Only AMCA certified fans will be accepted with no exceptions.
Sound power ratings shall be shown in eight octave bands and will be corrected for the specific installation, divergence, reflection, and distance by the specifying engineer. All sound power ratings shall be in decibels and reference 10^{-12} watts. Single figure dBA levels only are not acceptable.

CONSTUCTION

All FRP composite components shall be fabricated in accordance with ASTM Standard Specification D4167-97 (Reapproved 2002) for Fiber Reinforced Plastic Fans & Blowers. All resins shall be clear to permit the detection of imperfections in the laminate structure. Use of any additives in the laminates which may render such imperfections difficult to detect shall not be permitted.

FAN HOUSING

The fan housing shall be of solid FRP composite one-piece construction (no center flange), fabricated by open molding using corrosion grade resins. A glass veil will be used on all airstream surfaces giving a resin rich liner for optimum chemical resistance. Fasteners shall be 316ss and where exposed to the fan air stream they will be fully encapsulated within the FRP laminate to achieve maximum torque capability with no deviation of the air stream surfaces to minimize resistance and prevent build up of contaminants. The housing shall be supplied with an undrilled outlet flange (Option is pre drilled) and a slip type inlet. The exterior of the fan housing shall have a UFBL grey gel coat finish containing U.V. inhibitor to prevent ultra violet light degradation.

FAN WHEEL

The fan wheel shall be backward inclined design of solid FRP construction with a wheel cone for a smooth transition from the inlet funnel. The wheel shall be positively locked onto a stepped shaft by means of a 316ss retaining plate, which is protected from the airstream by FRP encapsulation. (Taper lock bushings are not acceptable.). The wheel shall be balanced statically and dynamically as per ANSI/AMCA Standard 204-05 Balance Quality & Vibration Levels for Fans to grade G 6.3 which is in accordance with the Industrial Process and Power Generation Fan Application Category BV-3

SHAFT

Shafts will be 316ss accurately turned & gauged for accuracy and sized so that the first critical speed is a minimum of 1.35 times the maximum operating speed.

SHAFT SEAL

Shaft seal shall be Teflon which is precision cut for a close tolerance fit with the fan shaft. The seal will seat in a FRP composite seal box and fastened into the box by 316ss fasteners.

BEARINGS

Fan bearings shall be completely isolated from the contaminated air stream and designed for a minimum life of 40,000 hours based on AFMBA L_{10} standard. Bearings shall be grease lubricated anti friction ball or spherical roller self aligning pillow block design.

SUPPORT STRUCTURE

Fan support structure shall be steel construction and protected with a minimum two coats of Amercoat 370 high build epoxy paint and will match the colour of the fan housing. Surfaces shall be prepared in accordance with paint manufacturer's recommendations and achieve a minimum dry film thickness of 6-8 mils. (Option is to specify surface preparation on steel or substitute alternate material such as stainless steel).

FACTORY TEST RUN

Prior to shipment all fans shall be mechanically test run and trim balanced to ensure vibration levels are in keeping with ANSI/AMCA Standard 204-05

WARRANTY

Fan manufacturer shall warrant that components shall be free from defects in workmanship and material under normal use and service for a period of one year from the date of original installation, or eighteen (18) months from the date of shipment, whichever occurs first.
Note: The addition of UFBL Features to the standard fan will amend the specification accordingly