

SIROCCO FAN SINGLE SUCTION

"TSSF" SERIES

'February 2012



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INTRODUCTION & AMCA SEAL INFORMATION



주)티에스에어테크는 공조용 및 산업용송풍기(FAN, BLOWER), 공기조화기(AHU) 생산업체로서 1997년 설립 이래 송풍기 개발에 적극 참여하여 왔으며 그동안 축적해온 경험과 끊임없는 연구개발 및 기술혁신을 통해 고품질의 송풍기를 고객 여러분께 제작 공급하고자 혼신의 노력을 다하고 있습니다.

주)티에스에어테크는 꾸준한 제품개발과 철저한 고객서비스로 명실상부한 송풍기(FAN)전문 메이커로서 정상에 우뚝 서고자 심혈을 기울여 최선을 다 할 것이며 끊임없는 기술개발과 철저한 품질관리로 여러분의 성원에 보답하고자 항상 노력하는 회사가 되겠습니다.

감사합니다.



(주)티에스에어테크가 획득한 TSSF SERIES SIROCCO FAN 의 AMCA seal에 대한 내용입니다.

등급표시는 AMCA 211과 AMCA 311에 의거 테스트 및 절차에 따른 것이며, AMCA 보증프로그램의 요구사항과 일치합니다.

TS Airtech Co., Ltd certifies that the type "TSSF" sirocco Fans shown herein are licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 211 and AMCA publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

ABOUT FANS



● 구조 및 형상

익현길이가 짧으며 날개폭이 넓고 날개익수가 많으며 날개의 끝부분이 회전방향으로 굽은 전곡형 (FORWARD CURVE TYPE) 구조

● MODEL & TYPE

SIZE : 임펠러 깃 바깥지름 기준 (#1.5호 ~ #18호)

흡입방식 : 편흡입(Single Suction), 양흡입(Double Suction)

베어링 지지방식 : 양축지지형, 편축지지형

구동방식 : V-BELT 구동형(v-belt driven type)

직결식(direct driven type-with coupling)

재질 : STEEL, STS, PVC

옵션 : SILENCER, GUIDE VANE, FILTER CHAMBER



● SIROCCO FAN의 특징

1) 대풍량 (Large air volume)

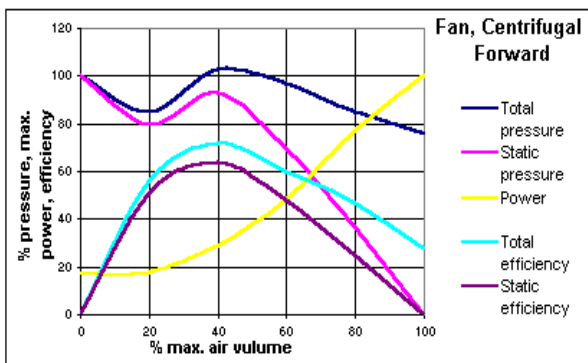
같은 주속도의 다른 FAN보다 많은 풍량을 낼 수 있습니다.

2) 저소음 (Low level sound)

정압 60mmAq이하의 저압에서 저속으로 정속한 운전이 가능합니다.

3) 성능특성 (Special Performance)

특성곡선 상의 정압곡선이 다른 원심 송풍기에 비하여 완만하기 때문에 풍량변동에 따른 풍압의 변화가 적습니다. 따라서 여러개의 급, 배기구에서 급, 배기할 경우 그 일부를 패쇄하여도 큰 영향을 받지 않습니다.

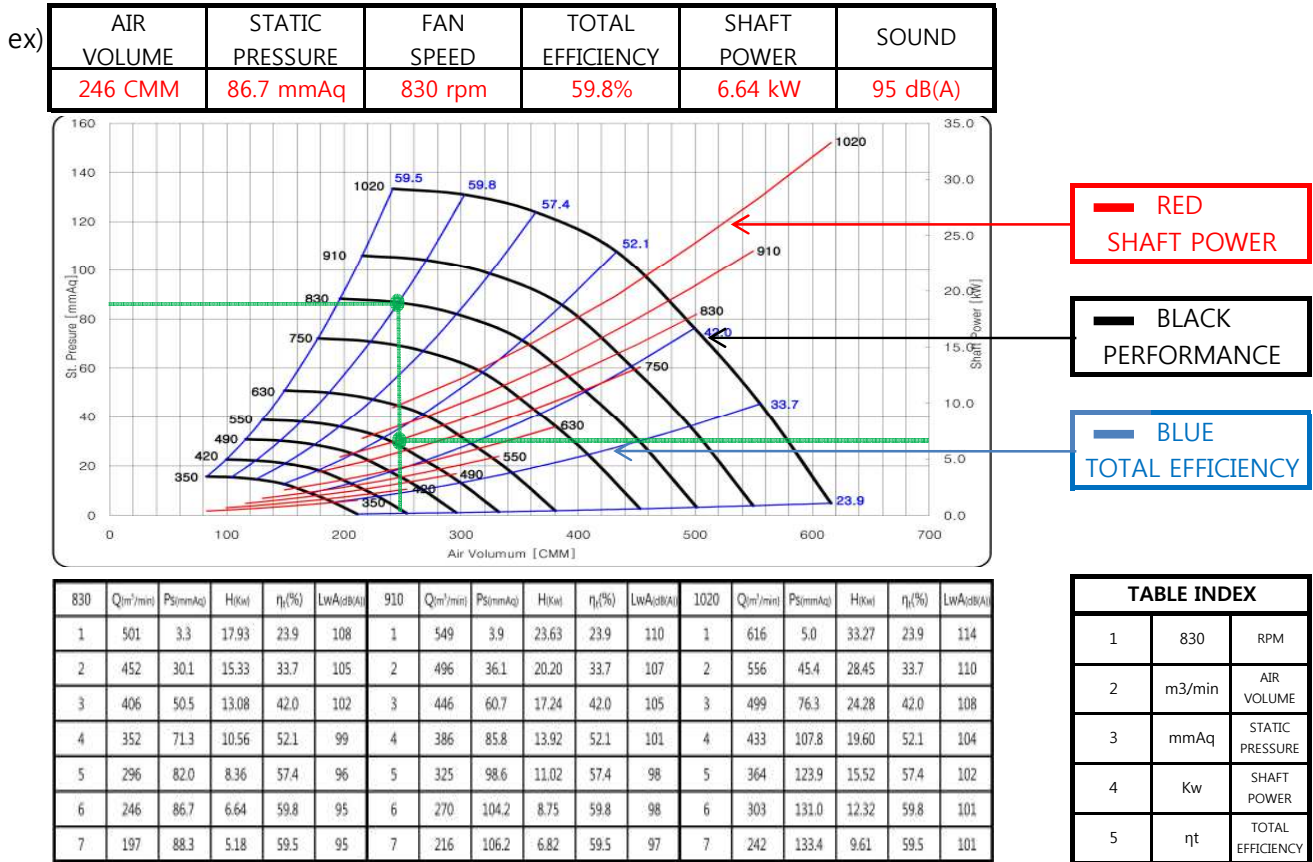


● 주요용도

- 일반 건축물 지하주차장 및 기계실, 발전기실, 전기실 급. 배기
- 소방 제연용 급. 배기, 정화조, 주방 급. 배기
- 공기조화기 RETURN용, 지하철 환기등 기타 국소부위 급. 배기

FAN SELECT METHOD

a. FAN 선정방법 예제 (Select Method Example)



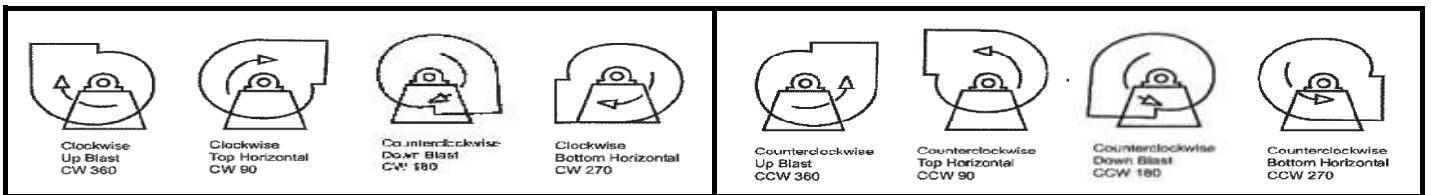
b. FAN 회전과 토출방향 (Fan Rotation and Discharge)

FAN의 회전과 토출방향은 AMCA표준 99-2406-03을 기준으로 합니다.

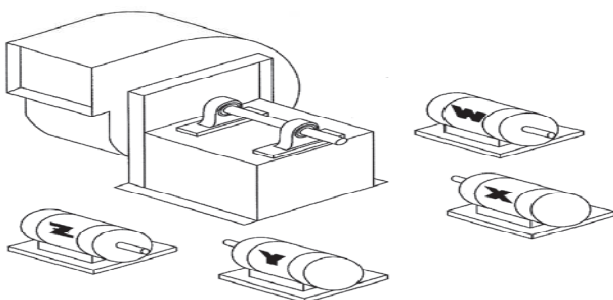
회전방향은 FAN의 구동측으로 부터 결정됩니다.

CW-clockwise rotation

CCW-center-clockwise rotation



c. 모터 위치 (Motor Position)

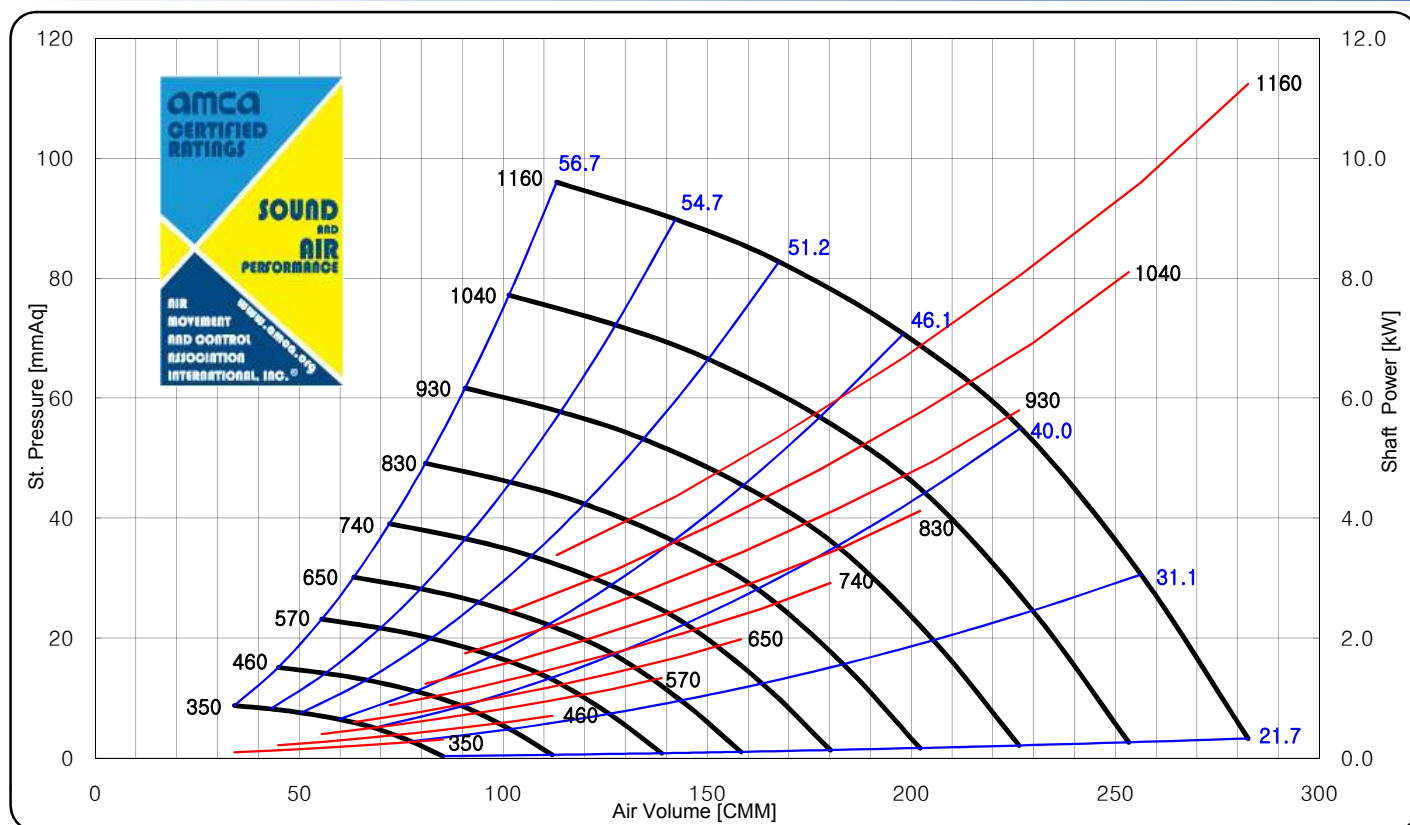


벨트구동 원심형 FAN의 모터방향은 AMCA 표준 99-2407-03을 기준으로 합니다.

모터의 위치는 FAN의 구동측 면과 지정된 위치인 W,X,Y,Z로 결정됩니다.

The position of the motor for belt drive centrifugal fan is in accordance with AMCA standard 99-2407-03.
Location of motor is determined by facing the drive side of fan and designating the positions by letters W, X, Y, or Z.

AIR PERFORMANCE AND SOUND DATA - TSSF #3SS

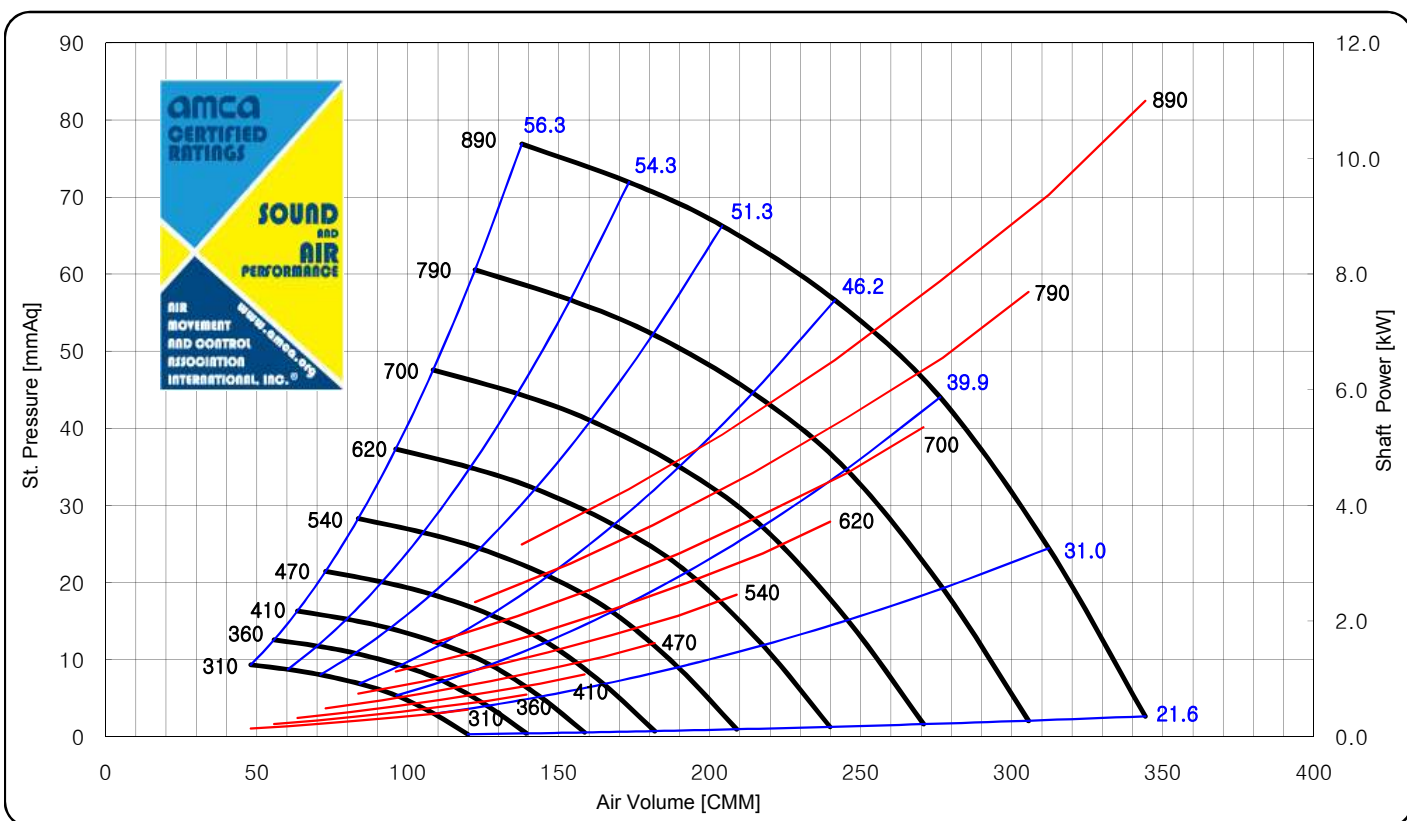


350	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	460	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	570	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))
1	85	0.3	0.31	21.7	76	1	112	0.5	0.70	21.7	83	1	139	0.8	1.33	21.7	89
2	77	2.8	0.26	31.1	73	2	102	4.8	0.60	31.1	80	2	126	7.4	1.14	31.1	85
3	68	5.0	0.22	40.0	70	3	90	8.6	0.50	40.0	77	3	111	13.3	0.96	40.0	82
4	60	6.4	0.18	46.1	67	4	79	11.1	0.42	46.1	74	4	97	17.1	0.79	46.1	80
5	51	7.5	0.15	51.2	64	5	66	13.0	0.33	51.2	71	5	82	20.0	0.64	51.2	77
6	43	8.2	0.12	54.7	62	6	56	14.1	0.27	54.7	69	6	70	21.7	0.52	54.7	75
7	34	8.7	0.09	56.7	61	7	45	15.1	0.21	56.7	68	7	56	23.2	0.40	56.7	74
650	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	740	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	830	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))
1	158	1.0	1.98	21.7	92	1	180	1.3	2.92	21.7	95	1	202	1.7	4.12	21.7	98
2	144	9.6	1.69	31.1	89	2	163	12.4	2.49	31.1	92	2	183	15.6	3.51	31.1	95
3	127	17.3	1.42	40.0	86	3	145	22.4	2.09	40.0	89	3	162	28.1	2.95	40.0	92
4	111	22.2	1.17	46.1	83	4	126	28.8	1.73	46.1	86	4	142	36.2	2.44	46.1	89
5	94	26.0	0.94	51.2	81	5	107	33.7	1.39	51.2	84	5	120	42.3	1.96	51.2	87
6	80	28.2	0.77	54.7	79	6	91	36.5	1.13	54.7	82	6	102	46.0	1.59	54.7	85
7	63	30.1	0.60	56.7	77	7	72	39.1	0.88	56.7	80	7	81	49.1	1.24	56.7	83
930	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	1040	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	1160	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))
1	226	2.1	5.79	21.7	101	1	253	2.6	8.10	21.7	104	1	283	3.2	11.24	21.7	107
2	205	19.6	4.94	31.1	98	2	230	24.6	6.91	31.1	101	2	256	30.5	9.59	31.1	103
3	182	35.3	4.15	40.0	95	3	203	44.2	5.80	40.0	98	3	227	55.0	8.05	40.0	101
4	159	45.4	3.44	46.1	92	4	178	56.8	4.80	46.1	95	4	198	70.7	6.67	46.1	98
5	134	53.2	2.76	51.2	90	5	150	66.5	3.86	51.2	93	5	168	82.7	5.35	51.2	96
6	114	57.7	2.24	54.7	88	6	128	72.2	3.14	54.7	91	6	142	89.8	4.35	54.7	94
7	91	61.7	1.74	56.7	87	7	101	77.1	2.44	56.7	90	7	113	96.0	3.38	56.7	93

* Performance certified is for installation type B - free inlet, ducted outlet. Performance ratings (kW) do not include transmission losses. Performance ratings do not include the effects of appurtenances(accessories).

* Values shown are for inlet LwA sound power levels for installation Type B free inlet, ducted outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.

AIR PERFORMANCE AND SOUND DATA - TSSF #3.5SS

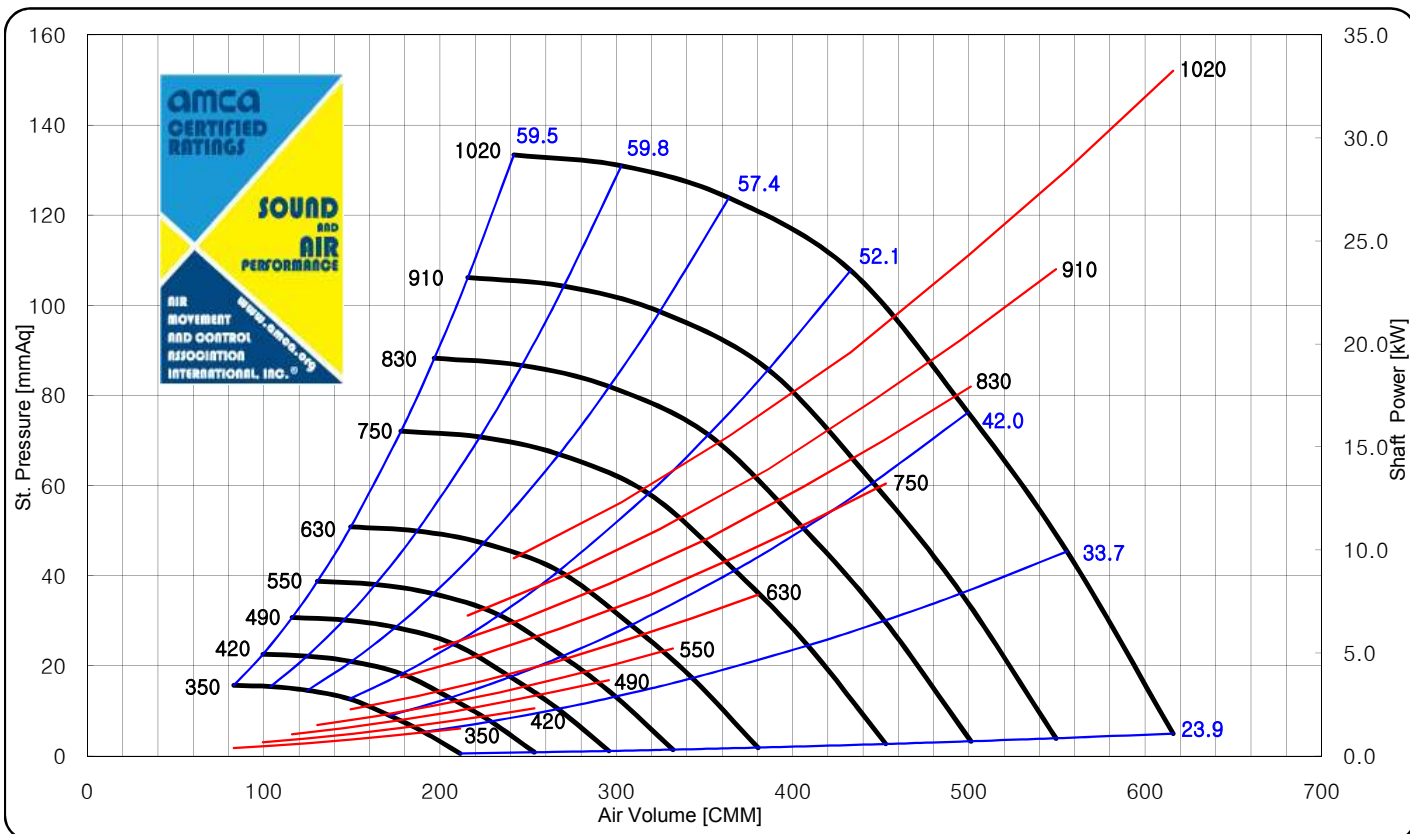


310	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	360	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	410	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))
1	120	0.3	0.46	21.6	78	1	139	0.4	0.73	21.6	81	1	159	0.6	1.08	21.6	85
2	109	3.0	0.40	31.0	74	2	126	4.0	0.62	31.0	78	2	144	5.2	0.92	31.0	81
3	96	5.3	0.33	39.9	72	3	112	7.2	0.52	39.9	75	3	127	9.3	0.77	39.9	79
4	84	6.9	0.275	46.2	69	4	98	9.3	0.43	46.2	72	4	111	12.0	0.64	46.2	76
5	71	8.0	0.22	51.3	66	5	83	10.8	0.35	51.3	70	5	94	14.1	0.51	51.3	73
6	60	8.7	0.18	54.3	64	6	70	11.8	0.28	54.3	67	6	80	15.3	0.42	54.3	71
7	48	9.3	0.14	56.3	62	7	56	12.6	0.22	56.3	66	7	64	16.3	0.33	56.3	69
470	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	540	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	620	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))
1	182	0.7	1.62	21.6	88	1	209	1.0	2.46	21.6	92	1	240	1.3	3.72	21.6	95
2	165	6.8	1.38	31.0	85	2	189	9.0	2.09	31.0	89	2	218	11.9	3.17	31.0	92
3	146	12.3	1.16	39.9	82	3	168	16.2	1.76	39.9	86	3	192	21.4	2.66	39.9	89
4	128	15.8	0.96	46.2	79	4	146	20.8	1.46	46.2	83	4	168	27.5	2.20	46.2	87
5	108	18.5	0.77	51.3	77	5	124	24.4	1.17	51.3	81	5	142	32.2	1.77	51.3	84
6	92	20.1	0.63	54.3	75	6	105	26.5	0.96	54.3	78	6	121	34.9	1.45	54.3	82
7	73	21.4	0.49	56.3	73	7	84	28.3	0.74	56.3	77	7	96	37.3	1.12	56.3	81
700	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	790	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	890	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))
1	271	1.6	5.35	21.6	98	1	306	2.1	7.69	21.6	101	1	344	2.6	11.00	21.6	104
2	246	15.1	4.56	31.0	95	2	277	19.3	6.55	31.0	98	2	312	24.5	9.37	31.0	101
3	217	27.2	3.83	39.9	92	3	245	34.7	5.51	39.9	95	3	276	44.0	7.88	39.9	98
4	190	35.0	3.17	46.2	90	4	214	44.6	4.56	46.2	93	4	241	56.6	6.52	46.2	96
5	161	41.0	2.54	51.3	87	5	181	52.2	3.66	51.3	90	5	204	66.3	5.23	51.3	93
6	136	44.5	2.08	54.3	85	6	154	56.7	2.99	54.3	88	6	173	71.9	4.28	54.3	91
7	108	47.6	1.62	56.3	84	7	122	60.6	2.33	56.3	87	7	138	76.9	3.33	56.3	90

* Performance certified is for installation type B - free inlet. ducted outlet. Performance ratings (kW) do not include transmission losses.
Performance ratings do not include the effects of appurtenances(accessories).

* Values shown are for inlet LwA sound power levels for installation Type B free inlet, ducted outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.

AIR PERFORMANCE AND SOUND DATA - TSSF #4SS

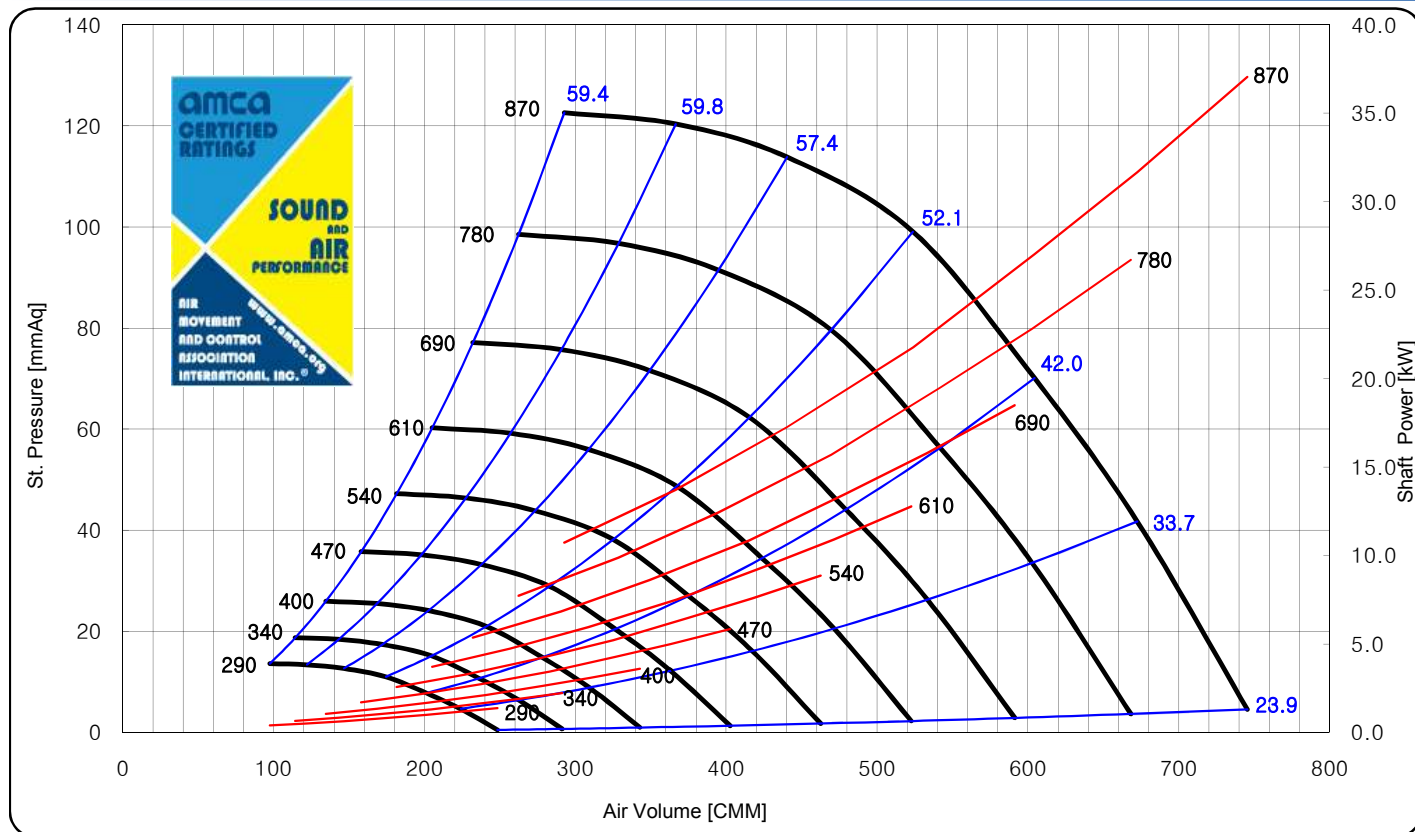


350	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	420	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	490	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))
1	211	0.6	1.34	23.9	85	1	254	0.8	2.32	23.9	89	1	296	1.1	3.69	23.9	94
2	191	5.3	1.15	33.7	82	2	229	7.7	1.99	33.7	87	2	267	10.5	3.15	33.7	91
3	171	9.0	0.98	42.0	80	3	206	12.9	1.70	42.0	84	3	240	17.6	2.69	42.0	89
4	149	12.7	0.79	52.1	76	4	178	18.3	1.37	52.1	81	4	208	24.9	2.17	52.1	85
5	125	14.6	0.63	57.4	73	5	150	21.0	1.08	57.4	77	5	175	28.6	1.72	57.4	82
6	104	15.4	0.50	59.8	71	6	125	22.2	0.86	59.8	76	6	145	30.2	1.37	59.8	81
7	83	15.7	0.39	59.5	71	7	100	22.6	0.67	59.5	76	7	116	30.8	1.06	59.5	80
550	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	630	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	750	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))
1	332	1.4	5.22	23.9	97	1	380	1.9	7.84	23.9	100	1	453	2.7	13.23	23.9	105
2	300	13.2	4.46	33.7	94	2	343	17.3	6.70	33.7	97	2	409	24.5	11.31	33.7	102
3	269	22.2	3.81	42.0	92	3	308	29.1	5.72	42.0	95	3	367	41.2	9.65	42.0	100
4	233	31.3	3.07	52.1	88	4	267	41.1	4.62	52.1	91	4	318	58.3	7.79	52.1	96
5	196	36.0	2.43	57.4	85	5	225	47.2	3.66	57.4	88	5	268	67.0	6.17	57.4	93
6	163	38.1	1.93	59.8	84	6	187	50.0	2.90	59.8	87	6	223	70.8	4.90	59.8	92
7	130	38.8	1.51	59.5	84	7	149	50.9	2.26	59.5	87	7	178	72.1	3.82	59.5	92
830	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	910	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))	1020	Q(m³/min)	PS(mmAq)	H(Kw)	η _t (%)	LwA(dB(A))
1	501	3.3	17.93	23.9	108	1	549	3.9	23.63	23.9	110	1	616	5.0	33.27	23.9	114
2	452	30.1	15.33	33.7	105	2	496	36.1	20.20	33.7	107	2	556	45.4	28.45	33.7	110
3	406	50.5	13.08	42.0	102	3	446	60.7	17.24	42.0	105	3	499	76.3	24.28	42.0	108
4	352	71.3	10.56	52.1	99	4	386	85.8	13.92	52.1	101	4	433	107.8	19.60	52.1	104
5	296	82.0	8.36	57.4	96	5	325	98.6	11.02	57.4	98	5	364	123.9	15.52	57.4	102
6	246	86.7	6.64	59.8	95	6	270	104.2	8.75	59.8	98	6	303	131.0	12.32	59.8	101
7	197	88.3	5.18	59.5	95	7	216	106.2	6.82	59.5	97	7	242	133.4	9.61	59.5	101

* Performance certified is for installation type B - free inlet, ducted outlet. Performance ratings (kW) do not include transmission losses. Performance ratings do not include the effects of appurtenances(accessories).

* Values shown are for inlet LwA sound power levels for installation Type B free inlet, ducted outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.

AIR PERFORMANCE AND SOUND DATA - TSSF #4.5SS

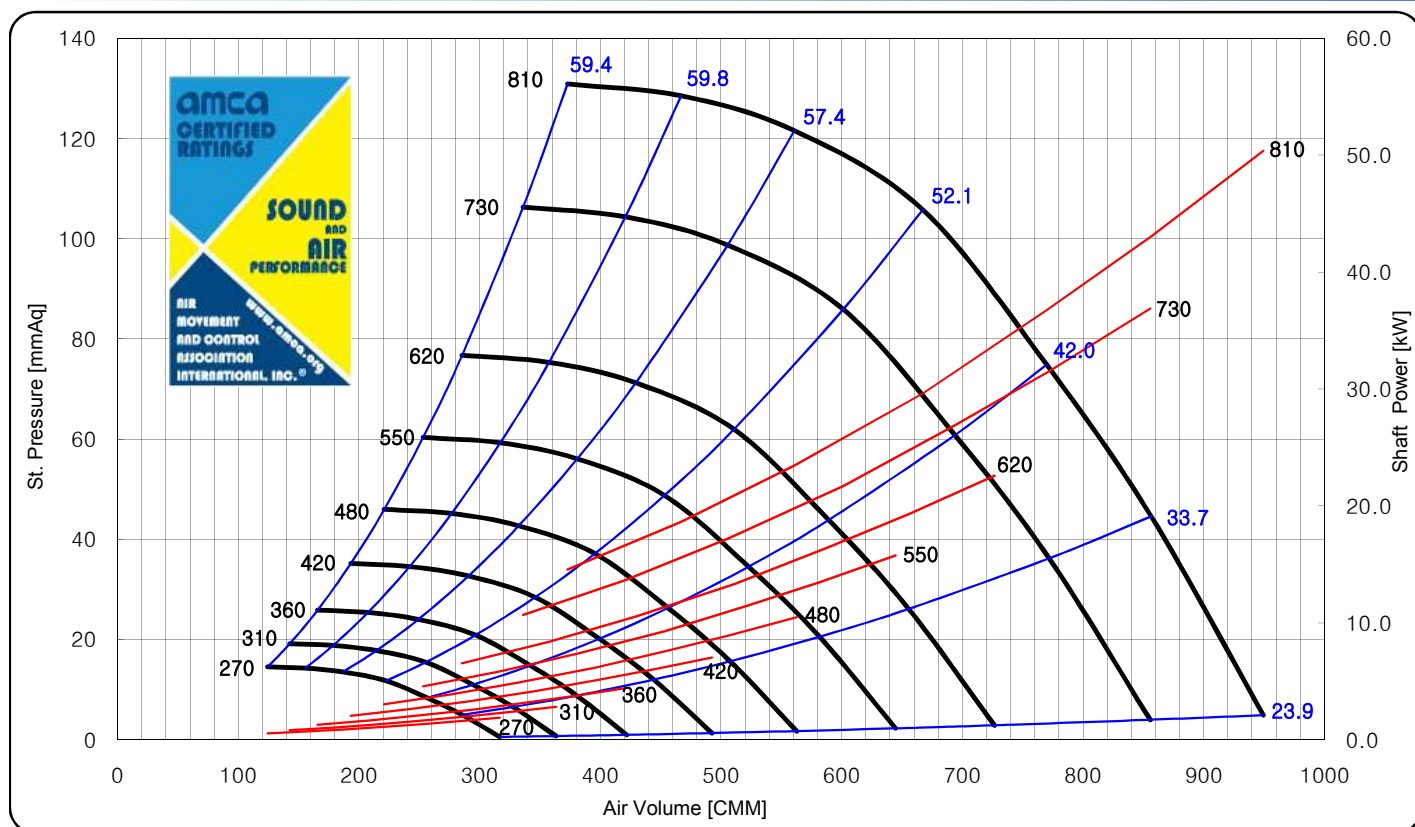


290	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	340	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	400	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	248	0.5	1.37	23.9	83	1	291	0.7	2.21	23.9	87	1	343	1.0	3.60	23.9	92
2	224	4.6	1.17	33.7	80	2	263	6.4	1.89	33.7	85	2	309	8.8	3.08	33.7	89
3	201	7.8	1.00	42.0	78	3	236	10.7	1.61	42.0	83	3	278	14.8	2.63	42.0	87
4	175	11.0	0.81	52.1	74	4	205	15.1	1.30	52.1	79	4	241	20.9	2.11	52.1	83
5	147	12.6	0.64	57.4	71	5	172	17.4	1.03	57.4	75	5	202	24.0	1.68	57.4	80
6	122	13.4	0.51	59.8	70	6	143	18.4	0.82	59.8	74	6	169	25.4	1.33	59.8	79
7	98	13.6	0.40	59.4	70	7	114	18.7	0.64	59.4	74	7	135	25.9	1.04	59.4	78
470	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	540	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	610	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	403	1.3	5.84	23.9	96	1	463	1.8	8.86	23.9	100	1	523	2.2	12.77	23.9	103
2	363	12.2	4.99	33.7	93	2	417	16.1	7.57	33.7	97	2	472	20.5	10.91	33.7	100
3	327	20.4	4.26	42.0	91	3	375	27.0	6.46	42.0	95	3	424	34.4	9.31	42.0	98
4	283	28.9	3.43	52.1	87	4	325	38.1	5.20	52.1	91	4	367	48.7	7.50	52.1	94
5	238	33.2	2.72	57.4	84	5	273	43.8	4.13	57.4	88	5	309	55.9	5.95	57.4	91
6	198	35.1	2.16	59.8	83	6	227	46.3	3.28	59.8	87	6	257	59.1	4.72	59.8	90
7	158	35.8	1.69	59.4	83	7	182	47.2	2.56	59.4	87	7	205	60.2	3.69	59.4	90
690	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	780	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	870	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	591	2.9	18.48	23.9	106	1	668	3.7	26.69	23.9	109	1	745	4.6	37.04	23.9	113
2	533	26.2	15.79	33.7	103	2	603	33.5	22.81	33.7	107	2	672	41.7	31.65	33.7	109
3	479	44.1	13.48	42.0	101	3	542	56.3	19.47	42.0	104	3	604	70.0	27.02	42.0	107
4	415	62.3	10.85	52.1	97	4	470	79.6	15.68	52.1	101	4	524	99.0	21.75	52.1	104
5	349	71.6	8.61	57.4	95	5	395	91.4	12.43	57.4	98	5	440	113.8	17.25	57.4	101
6	291	75.7	6.83	59.8	94	6	329	96.7	9.87	59.8	97	6	367	120.3	13.70	59.8	100
7	232	77.1	5.35	59.4	93	7	262	98.5	7.72	59.4	97	7	293	122.5	10.72	59.4	100

* Performance certified is for installation type B - free inlet. ducted outlet. Performance ratings (kW) do not include transmission losses. Performance ratings do not include the effects of appurtenances(accessories).

* Values shown are for inlet LwA sound power levels for installation Type B free inlet, ducted outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.

AIR PERFORMANCE AND SOUND DATA - TSSF #5SS

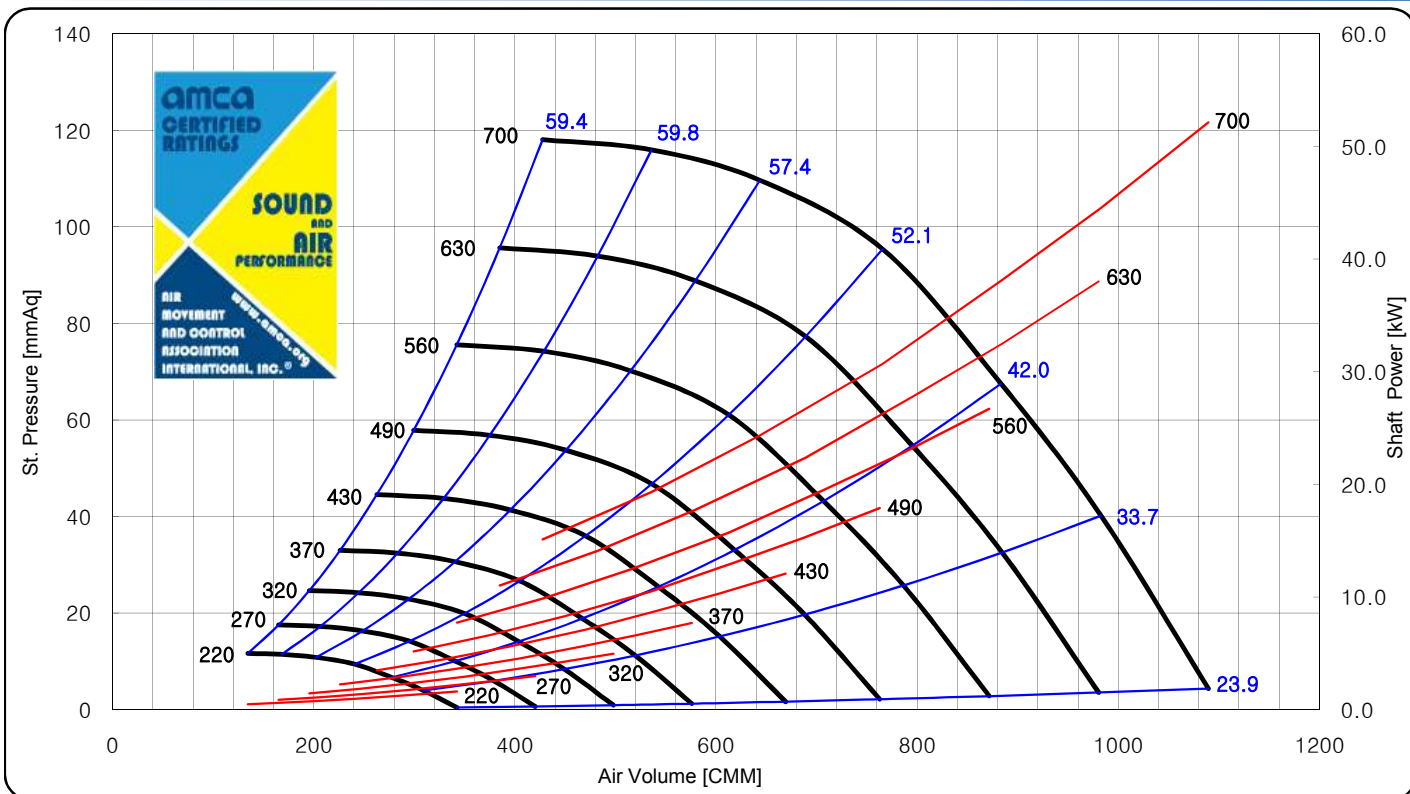


270	Q(m³/min)	PS(mmAq)	H(Kw)	ηt(%)	LwA(dB(A))	310	Q(m³/min)	PS(mmAq)	H(Kw)	ηt(%)	LwA(dB(A))	360	Q(m³/min)	PS(mmAq)	H(Kw)	ηt(%)	LwA(dB(A))
1	316	0.5	1.87	23.9	85	1	363	0.7	2.82	23.9	88	1	422	1.0	4.42	23.9	92
2	285	5.0	1.59	33.7	82	2	328	6.5	2.41	33.7	85	2	381	8.8	3.78	33.7	89
3	257	8.3	1.36	42.0	80	3	295	11.0	2.06	42.0	83	3	342	14.8	3.22	42.0	87
4	222	11.7	1.10	52.1	76	4	255	15.5	1.66	52.1	79	4	297	20.9	2.60	52.1	83
5	187	13.5	0.87	57.4	72	5	215	17.8	1.31	57.4	76	5	249	24.0	2.06	57.4	80
6	156	14.3	0.69	59.8	71	6	179	18.8	1.05	59.8	75	6	208	25.4	1.64	59.8	79
7	124	14.5	0.54	59.4	71	7	143	19.2	0.82	59.4	75	7	166	25.9	1.28	59.4	79
420	Q(m³/min)	PS(mmAq)	H(Kw)	ηt(%)	LwA(dB(A))	480	Q(m³/min)	PS(mmAq)	H(Kw)	ηt(%)	LwA(dB(A))	550	Q(m³/min)	PS(mmAq)	H(Kw)	ηt(%)	LwA(dB(A))
1	492	1.3	7.02	23.9	96	1	563	1.7	10.48	23.9	100	1	645	2.2	15.76	23.9	104
2	444	12.0	6.00	33.7	93	2	508	15.6	8.96	33.7	97	2	582	20.5	13.47	33.7	101
3	399	20.1	5.12	42.0	91	3	456	26.3	7.64	42.0	95	3	523	34.5	11.50	42.0	98
4	346	28.4	4.13	52.1	87	4	395	37.1	6.16	52.1	91	4	453	48.8	9.27	52.1	95
5	291	32.7	3.27	57.4	84	5	332	42.7	4.88	57.4	88	5	381	56.0	7.34	57.4	92
6	242	34.6	2.60	59.8	83	6	277	45.1	3.88	59.8	87	6	317	59.2	5.84	59.8	91
7	193	35.2	2.03	59.4	83	7	221	46.0	3.03	59.4	87	7	253	60.3	4.56	59.4	90
620	Q(m³/min)	PS(mmAq)	H(Kw)	ηt(%)	LwA(dB(A))	730	Q(m³/min)	PS(mmAq)	H(Kw)	ηt(%)	LwA(dB(A))	810	Q(m³/min)	PS(mmAq)	H(Kw)	ηt(%)	LwA(dB(A))
1	727	2.9	22.58	23.9	107	1	856	4.0	36.86	23.9	111	1	949	4.9	50.36	23.9	114
2	656	26.1	19.30	33.7	104	2	772	36.2	31.50	33.7	108	2	856	44.6	43.04	33.7	111
3	589	43.8	16.47	42.0	102	3	694	60.8	26.88	42.0	106	3	770	74.8	36.73	42.0	109
4	511	62.0	13.29	52.1	98	4	601	85.9	21.69	52.1	102	4	667	105.7	29.62	52.1	105
5	429	71.2	10.52	57.4	95	5	505	98.7	17.17	57.4	99	5	561	121.5	23.46	57.4	102
6	357	75.3	8.36	59.8	94	6	421	104.4	13.65	59.8	98	6	467	128.5	18.65	59.8	101
7	285	76.7	6.53	59.4	94	7	336	106.3	10.66	59.4	98	7	373	130.9	14.56	59.4	101

* Performance certified is for installation type B - free inlet. ducted outlet. Performance ratings (kW) do not include transmission losses. Performance ratings do not include the effects of appurtenances(accessories).

* Values shown are for inlet LwA sound power levels for installation Type B free inlet, ducted outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.

AIR PERFORMANCE AND SOUND DATA - TSSF #5.5SS

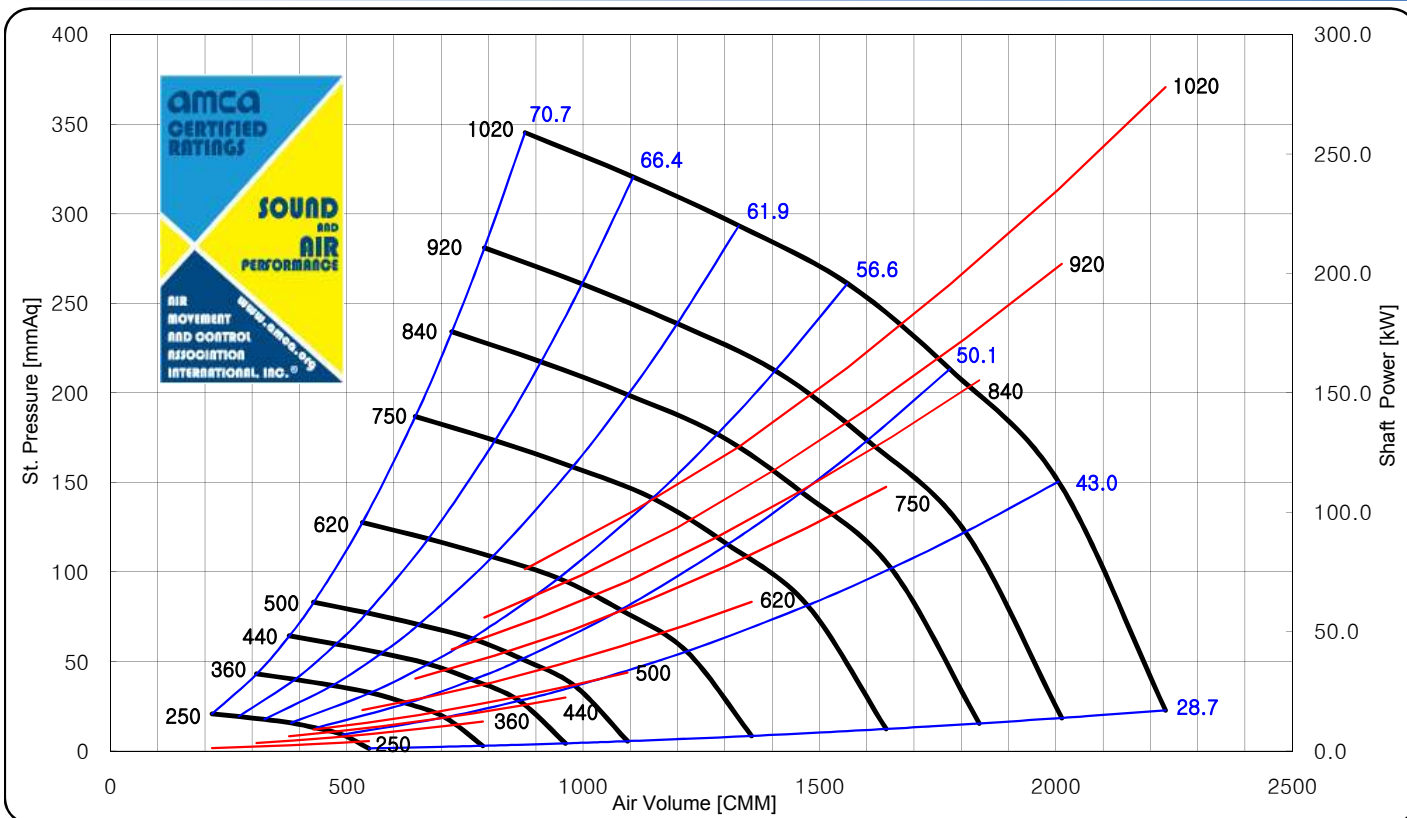


220	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	270	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	320	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	342	0.4	1.62	23.9	82	1	420	0.7	2.99	23.9	88	1	498	0.9	4.98	23.9	92
2	309	4.0	1.38	33.7	79	2	379	6.0	2.56	33.7	85	2	449	8.4	4.26	33.7	89
3	278	6.7	1.18	42.0	77	3	341	10.0	2.18	42.0	83	3	404	14.1	3.64	42.0	87
4	241	9.4	0.95	52.1	73	4	295	14.2	1.76	52.1	79	4	350	19.9	2.93	52.1	83
5	202	10.8	0.75	57.4	70	5	248	16.3	1.40	57.4	75	5	294	22.9	2.32	57.4	80
6	168	11.5	0.60	59.8	69	6	207	17.3	1.11	59.8	74	6	245	24.2	1.84	59.8	79
7	134	11.7	0.47	59.4	68	7	165	17.6	0.87	59.4	74	7	196	24.7	1.44	59.4	78
370	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	430	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	490	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	576	1.2	7.70	23.9	96	1	669	1.7	12.09	23.9	100	1	763	2.2	17.88	23.9	104
2	520	11.2	6.58	33.7	93	2	604	15.2	10.33	33.7	97	2	688	19.7	15.28	33.7	100
3	467	18.9	5.62	42.0	91	3	543	25.5	8.82	42.0	95	3	618	33.1	13.05	42.0	98
4	405	26.7	4.53	52.1	87	4	470	36.0	7.11	52.1	91	4	536	46.8	10.52	52.1	95
5	340	30.6	3.59	57.4	84	5	395	41.4	5.64	57.4	88	5	451	53.7	8.34	57.4	92
6	283	32.4	2.85	59.8	83	6	329	43.8	4.47	59.8	87	6	375	56.8	6.62	59.8	90
7	226	33.0	2.23	59.4	82	7	263	44.6	3.50	59.4	86	7	299	57.9	5.18	59.4	90
560	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	630	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	700	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	872	2.8	26.70	23.9	107	1	981	3.6	38.01	23.9	110	1	1090	4.4	52.14	23.9	113
2	786	25.7	22.81	33.7	104	2	885	32.6	32.48	33.7	107	2	983	40.2	44.56	33.7	110
3	707	43.2	19.48	42.0	102	3	795	54.7	27.74	42.0	105	3	884	67.5	38.06	42.0	108
4	613	61.1	15.71	52.1	98	4	689	77.3	22.36	52.1	101	4	766	95.4	30.68	52.1	104
5	515	70.2	12.45	57.4	95	5	579	88.8	17.72	57.4	98	5	644	109.7	24.31	57.4	101
6	429	74.2	9.88	59.8	94	6	482	93.9	14.07	59.8	97	6	536	116.0	19.30	59.8	100
7	342	75.6	7.73	59.4	94	7	385	95.6	11.01	59.4	97	7	428	118.1	15.10	59.4	100

* Performance certified is for installation type B - free inlet. ducted outlet. Performance ratings (kW) do not include transmission losses. Performance ratings do not include the effects of appurtenances(accessories).

* Values shown are for inlet LwA sound power levels for installation Type B free inlet, ducted outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.

AIR PERFORMANCE AND SOUND DATA - TSSF #6SS

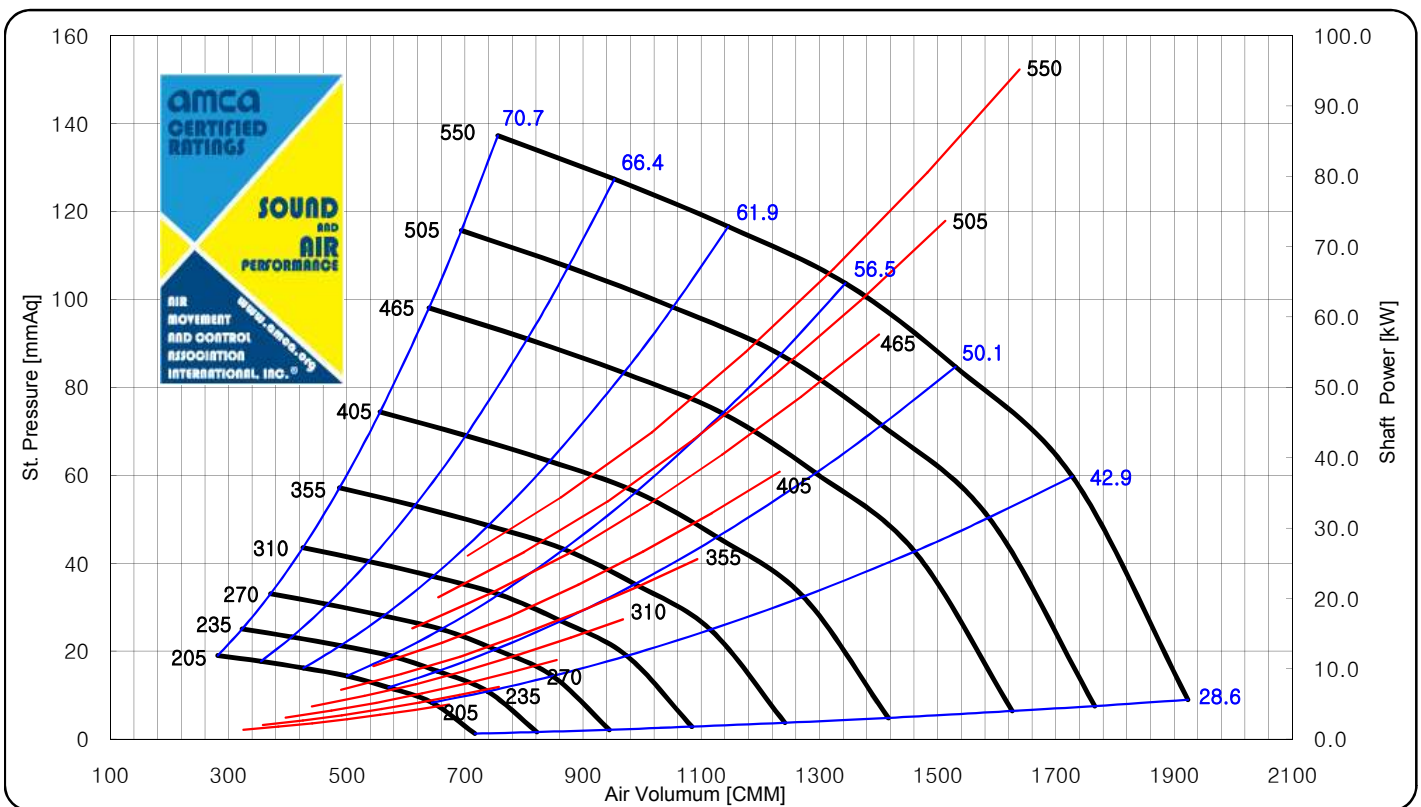


250	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	360	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	440	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	547	1.4	4.09	28.7	91	1	788	2.8	12.22	28.7	100	1	963	4.2	22.31	28.7	105
2	491	9.0	3.46	43.0	86	2	708	18.7	10.33	43.0	95	2	865	28.0	18.87	43.0	100
3	435	12.8	2.87	50.1	83	3	627	26.5	8.58	50.1	93	3	766	39.7	15.66	50.1	98
4	382	15.7	2.36	56.6	81	4	550	32.5	7.06	56.6	91	4	673	48.5	12.89	56.6	96
5	326	17.6	1.87	61.9	78	5	469	36.5	5.59	61.9	88	5	573	54.6	10.21	61.9	93
6	271	19.3	1.48	66.4	75	6	390	39.9	4.41	66.4	85	6	477	59.6	8.05	66.4	90
7	215	20.7	1.12	70.7	72	7	310	43.0	3.34	70.7	82	7	378	64.2	6.10	70.7	87
500	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	620	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	750	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	1094	5.4	32.73	28.7	108	1	1356	8.3	62.41	28.7	113	1	1641	12.2	110.48	28.7	117
2	983	36.1	27.69	43.0	103	2	1219	55.5	52.79	43.0	109	2	1474	81.3	93.45	43.0	113
3	870	51.2	22.99	50.1	101	3	1079	78.7	43.83	50.1	107	3	1305	115.2	77.58	50.1	111
4	764	62.7	18.91	56.6	99	4	948	96.4	36.05	56.6	105	4	1146	141.0	63.82	56.6	110
5	652	70.5	14.99	61.9	96	5	808	108.3	28.57	61.9	102	5	977	158.5	50.58	61.9	107
6	542	77.0	11.81	66.4	93	6	672	118.4	22.52	66.4	99	6	813	173.3	39.87	66.4	105
7	430	83.0	8.96	70.7	90	7	533	127.5	17.08	70.7	96	7	645	186.6	30.23	70.7	102
840	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	920	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	1020	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	1838	15.3	155.21	28.7	120	1	2013	18.4	203.92	28.7	122	1	2232	22.6	277.90	28.7	125
2	1651	101.9	131.29	43.0	116	2	1809	122.3	172.49	43.0	118	2	2005	150.3	235.07	43.0	121
3	1462	144.5	109.00	50.1	114	3	1601	173.4	143.20	50.1	116	3	1775	213.1	195.15	50.1	119
4	1284	176.9	89.66	56.6	112	4	1406	212.2	117.79	56.6	115	4	1559	260.8	160.53	56.6	117
5	1095	198.8	71.06	61.9	110	5	1199	238.5	93.36	61.9	112	5	1329	293.2	127.23	61.9	115
6	911	217.3	56.02	66.4	107	6	997	260.7	73.60	66.4	110	6	1106	320.4	100.30	66.4	113
7	722	234.1	42.47	70.7	105	7	791	280.8	55.79	70.7	107	7	877	345.2	76.03	70.7	110

* Performance certified is for installation type B - free inlet. ducted outlet. Performance ratings (kW) do not include transmission losses. Performance ratings do not include the effects of appurtenances(accessories).

* Values shown are for inlet LwA sound power levels for installation Type B free inlet, ducted outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.

AIR PERFORMANCE AND SOUND DATA - TSSF #7SS

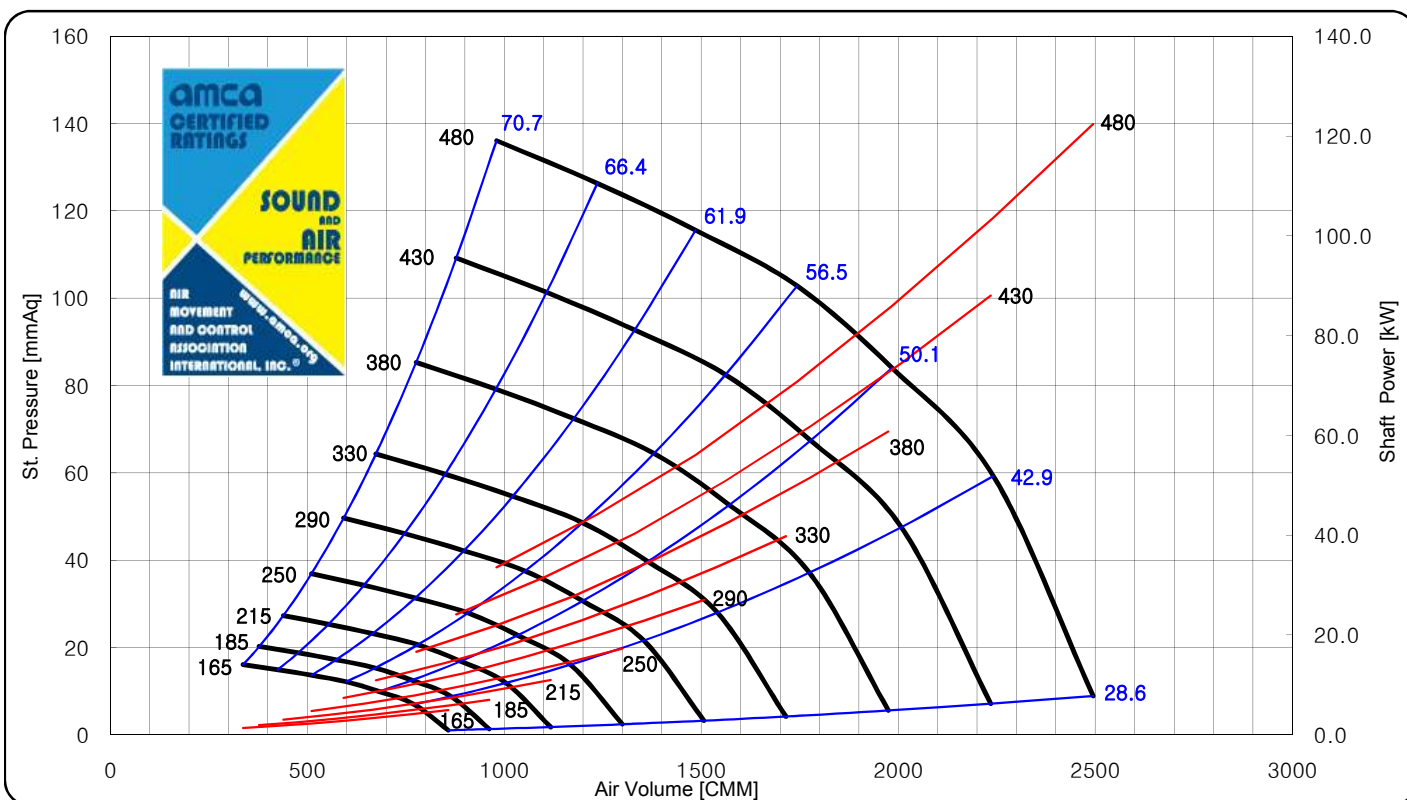


205	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	235	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	270	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	717	1.2	4.93	28.6	90	1	822	1.6	7.42	28.6	94	1	944.1	2.2	11.26	28.6	97
2	644	8.3	4.17	42.9	85	2	738	10.9	6.28	42.9	89	2	848.3	14.4	9.53	42.9	92
3	570	11.8	3.46	50.1	83	3	654	15.5	5.21	50.1	86	3	751.1	20.4	7.91	50.1	90
4	501	14.4	2.85	56.5	80	4	574	18.9	4.29	56.5	84	4	659.7	25.0	6.51	56.5	87
5	427	16.2	2.26	61.9	77	5	489	21.3	3.40	61.9	81	5	562.4	28.1	5.16	61.9	85
6	355	17.7	1.78	66.4	74	6	407	23.3	2.68	66.4	77	6	467.8	30.7	4.06	66.4	81
7	282	19.1	1.35	70.7	71	7	323	25.0	2.03	70.7	75	7	371.0	33.1	3.09	70.7	78
310	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	355	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	405	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	1084	2.9	17.04	28.6	101	1	1241	3.7	25.59	28.6	104	1	1416.2	4.9	38.00	28.6	107
2	974	19.0	14.42	42.9	96	2	1115	24.9	21.66	42.9	99	2	1272.5	32.4	32.15	42.9	103
3	862	26.9	11.97	50.1	94	3	988	35.3	17.98	50.1	97	3	1126.7	45.9	26.69	50.1	100
4	757	32.9	9.85	56.5	91	4	867	43.2	14.79	56.5	95	4	989.5	56.2	21.96	56.5	98
5	646	37.0	7.81	61.9	88	5	739	48.5	11.73	61.9	92	5	843.6	63.2	17.42	61.9	96
6	537	40.5	6.15	66.4	85	6	615	53.1	9.24	66.4	89	6	701.7	69.1	13.71	66.4	92
7	426	43.6	4.67	70.7	82	7	488	57.2	7.01	70.7	86	7	556.5	74.4	10.41	70.7	89
465	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	505	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	550	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	1626	6.4	57.51	28.6	111	1	1766	7.6	73.66	28.6	113	1	1923.2	9.0	95.16	28.6	115
2	1461	42.7	48.67	42.9	106	2	1587	50.4	62.34	42.9	108	2	1728.1	59.7	80.53	42.9	110
3	1294	60.5	40.40	50.1	104	3	1405	71.4	51.75	50.1	106	3	1530.1	84.7	66.85	50.1	108
4	1136	74.1	33.24	56.5	102	4	1234	87.4	42.58	56.5	104	4	1343.8	103.7	55.01	56.5	106
5	969	83.3	26.36	61.9	99	5	1052	98.2	33.76	61.9	101	5	1145.6	116.5	43.62	61.9	104
6	806	91.0	20.76	66.4	96	6	875	107.4	26.59	66.4	98	6	952.9	127.4	34.35	66.4	101
7	639	98.1	15.76	70.7	93	7	694	115.7	20.19	70.7	95	7	755.8	137.2	26.08	70.7	98

* Performance certified is for installation type B - free inlet, ducted outlet. Performance ratings (kW) do not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

* Values shown are for inlet LwA sound power levels for installation Type B free inlet, ducted outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

AIR PERFORMANCE AND SOUND DATA - TSSF #8SS

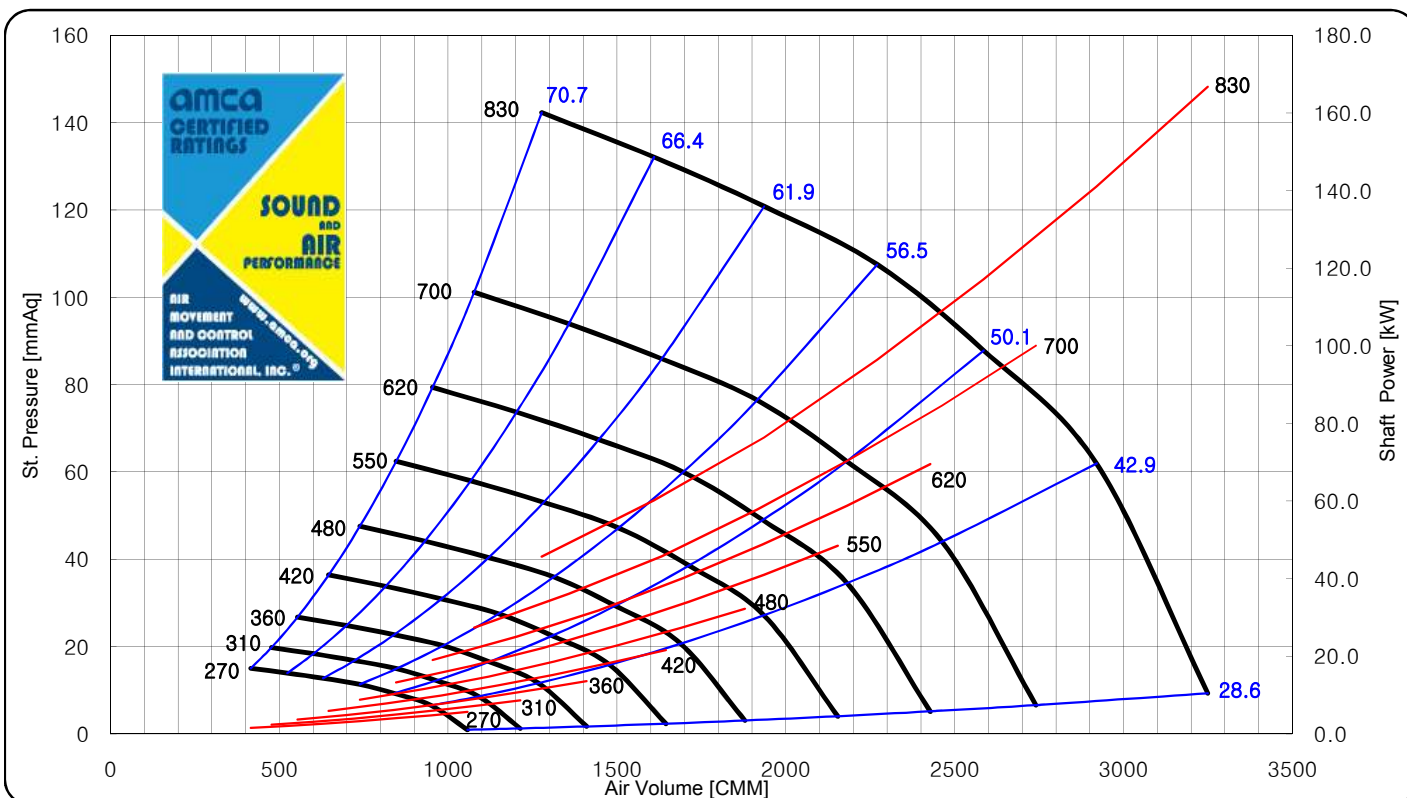


165	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	185	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	215	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	857	1.1	4.97	28.6	89	1	961	1.3	7.01	28.6	92	1	1117	1.8	11.00	28.6	96
2	770	7.0	4.21	42.9	84	2	864	8.8	5.93	42.9	87	2	1004	11.9	9.31	42.9	90
3	682	9.9	3.49	50.1	81	3	765	12.5	4.92	50.1	84	3	889	16.9	7.73	50.1	88
4	599	12.2	2.87	56.5	78	4	672	15.3	4.05	56.5	82	4	781	20.6	6.36	56.5	85
5	511	13.7	2.28	61.9	76	5	573	17.2	3.21	61.9	79	5	666	23.2	5.04	61.9	83
6	425	14.9	1.79	66.4	72	6	476	18.8	2.53	66.4	75	6	554	25.3	3.97	66.4	79
7	337	16.1	1.36	70.7	69	7	378	20.2	1.92	70.7	72	7	439	27.3	3.01	70.7	76
250	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	290	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	330	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	1299	2.4	17.30	28.6	99	1	1507	3.3	27.00	28.6	103	1	1715	4.2	39.79	28.6	106
2	1167	16.1	14.64	42.9	94	2	1354	21.6	22.85	42.9	98	2	1541	28.0	33.67	42.9	102
3	1034	22.8	12.15	50.1	92	3	1199	30.7	18.96	50.1	96	3	1364	39.7	27.94	50.1	99
4	908	27.9	10.00	56.5	89	4	1053	37.5	15.61	56.5	93	4	1198	48.6	23.00	56.5	97
5	774	31.4	7.92	61.9	87	5	898	42.2	12.36	61.9	91	5	1022	54.6	18.22	61.9	94
6	644	34.3	6.24	66.4	83	6	747	46.1	9.74	66.4	87	6	850	59.7	14.35	66.4	91
7	511	36.9	4.74	70.7	80	7	592	49.7	7.40	70.7	84	7	674	64.3	10.90	70.7	88
380	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	430	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	480	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	1975	5.6	60.75	28.6	110	1	2235	7.2	88.03	28.6	113	1	2494	8.9	122.45	28.6	115
2	1774	37.2	51.41	42.9	105	2	2008	47.6	74.49	42.9	108	2	2241	59.3	103.62	42.9	111
3	1571	52.7	42.67	50.1	103	3	1778	67.4	61.82	50.1	106	3	1985	84.0	86.00	50.1	109
4	1380	64.5	35.12	56.5	101	4	1561	82.5	50.88	56.5	104	4	1743	102.9	70.78	56.5	107
5	1176	72.4	27.81	61.9	98	5	1331	92.7	40.30	61.9	101	5	1486	115.6	56.06	61.9	104
6	978	79.2	21.91	66.4	95	6	1107	101.4	31.75	66.4	98	6	1236	126.3	44.17	66.4	101
7	776	85.3	16.65	70.7	92	7	878	109.2	24.12	70.7	95	7	980	136.1	33.55	70.7	98

* Performance certified is for installation type B - free inlet. ducted outlet. Performance ratings (kW) do not include transmission losses.
Performance ratings do not include the effects of appurtenances(accessories).

* Values shown are for inlet LwA sound power levels for installation Type B free inlet, ducted outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.

AIR PERFORMANCE AND SOUND DATA - TSSF #9SS

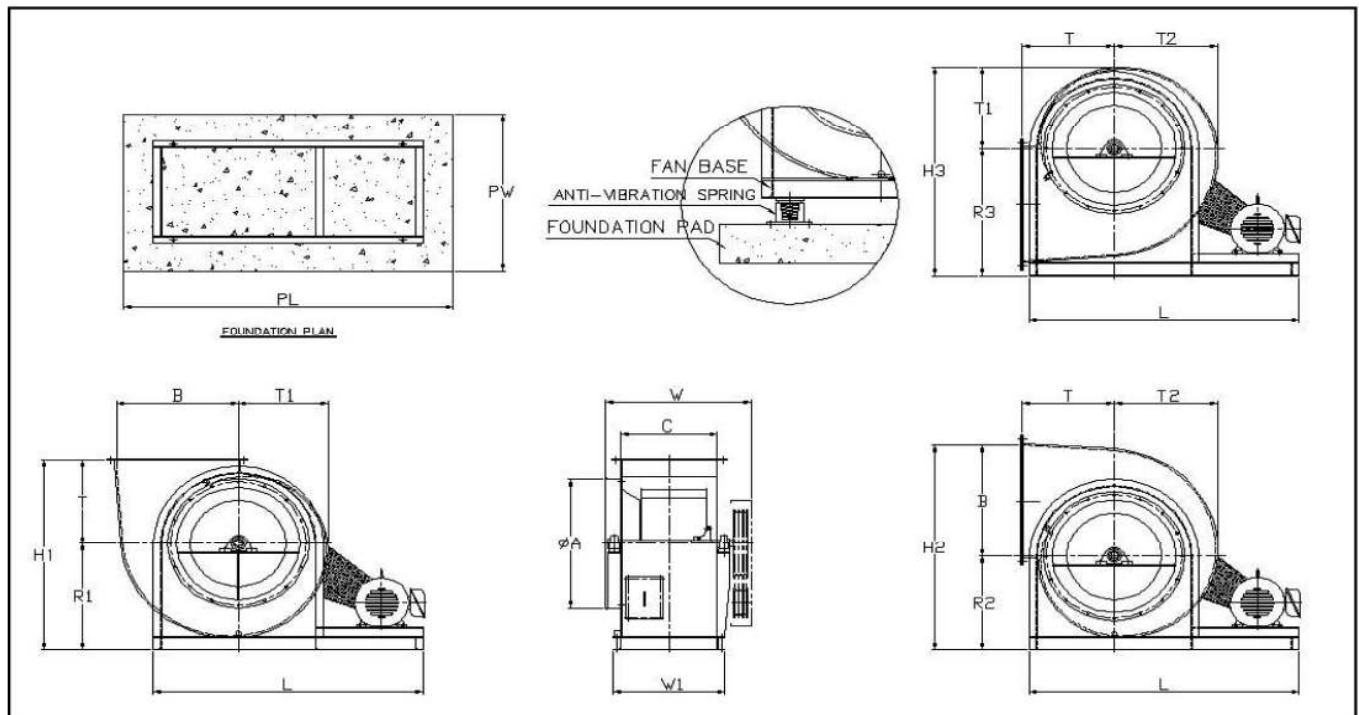


270	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	310	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	360	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	1057	1.0	5.74	28.6	105	1	1214	1.3	8.69	28.6	109	1	1410	1.7	13.61	28.6	113
2	950	6.6	4.86	42.9	104	2	1091	8.6	7.35	42.9	108	2	1267	11.7	11.51	42.9	111
3	841	9.3	4.03	50.1	103	3	966	12.3	6.10	50.1	107	3	1122	16.5	9.56	50.1	111
4	739	11.4	3.32	56.5	103	4	848	15.0	5.02	56.5	106	4	985	20.2	7.87	56.5	110
5	630	12.8	2.63	61.9	103	5	723	16.9	3.98	61.9	106	5	840	22.7	6.23	61.9	110
6	524	14.0	2.07	66.4	102	6	601	18.4	3.14	66.4	106	6	698	24.8	4.91	66.4	110
7	415	15.1	1.57	70.7	102	7	477	19.8	2.38	70.7	106	7	554	26.8	3.73	70.7	109
420	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	480	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	550	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	1645	2.4	21.61	28.6	116	1	1880	3.1	32.26	28.6	120	1	2154	4.1	48.53	28.6	123
2	1478	15.9	18.28	42.9	115	2	1689	20.7	27.29	42.9	118	2	1935	27.2	41.05	42.9	122
3	1309	22.5	15.18	50.1	114	3	1495	29.4	22.66	50.1	118	3	1714	38.6	34.09	50.1	121
4	1149	27.5	12.49	56.5	114	4	1313	36.0	18.64	56.5	117	4	1505	47.2	28.05	56.5	121
5	980	30.9	9.90	61.9	114	5	1120	40.4	14.78	61.9	117	5	1283	53.1	22.23	61.9	120
6	815	33.8	7.80	66.4	113	6	931	44.2	11.64	66.4	117	6	1067	58.0	17.52	66.4	120
7	646	36.4	5.92	70.7	113	7	739	47.6	8.84	70.7	116	7	846	62.5	13.29	70.7	120
620	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	700	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))	830	Q(m³/min)	PS(mmAq)	H(Kw)	$\eta_t(\%)$	LwA(dB(A))
1	2428	5.2	69.52	28.6	126	1	2741	6.6	100.05	28.6	129	1	3250	9.3	166.78	28.6	133
2	2182	34.6	58.80	42.9	125	2	2463	44.1	84.63	42.9	128	2	2920	61.9	141.08	42.9	132
3	1932	49.0	48.83	50.1	124	3	2181	62.5	70.28	50.1	127	3	2586	87.8	117.15	50.1	131
4	1696	60.0	40.18	56.5	123	4	1915	76.5	57.82	56.5	127	4	2271	107.5	96.39	56.5	131
5	1446	67.4	31.85	61.9	123	5	1633	85.9	45.83	61.9	126	5	1936	120.8	76.40	61.9	130
6	1203	73.7	25.09	66.4	123	6	1358	93.9	36.11	66.4	126	6	1610	132.1	60.20	66.4	130
7	954	79.4	19.04	70.7	123	7	1077	101.2	27.41	70.7	126	7	1277	142.3	45.69	70.7	130

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* Values shown are for inlet LwA sound power levels for installation Type B free inlet, ducted outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.

Forward Wheels (Sirocco) - "TSSF" SERIES



FAN NO.		DIMENSION (TSSF SERIES)									
		#3	#3.5	#4	#4.5	#5	#5.5	#6	#7	#8	#9
Wheel Dia	D	450	525	600	675	750	825	900	1050	1200	1350
Inlet	A	480	560	635	710	795	875	930	1090	1240	1395
Outlet	B	460	535	615	690	770	845	915	1070	1220	1375
	C	360	420	480	540	600	660	720	840	960	1080
Width	W	590	660	730	800	870	965	1030	1210	1380	1530
Center Height	R1	455	525	570	660	725	775	830	975	1125	1275
	R2	415	465	515	565	650	690	780	870	1005	1135
	R3	515	590	675	770	840	910	970	1140	1315	1485
Total Height	H1	765	880	995	1120	1280	1360	1480	1685	1965	2180
	H2	865	975	1125	1245	1430	1530	1680	1920	2225	2485
	H3	825	940	1085	1205	1395	1490	1640	1870	2175	2435
Casing	T	350	410	460	510	560	610	660	740	860	1000
	T1	340	390	450	485	560	610	680	780	890	1010
	T2	385	450	520	580	660	700	790	890	1050	1160
Fan Base	L	1000	1150	1300	1400	1600	1650	1700	2000	2200	2400
	W1	440	500	560	620	700	760	820	940	1060	1210
Fan Pad	PL	1300	1450	1600	1700	1900	1950	2000	2300	2500	2700
	PW	740	800	860	920	1000	1060	1120	1240	1360	1510

(All Dimensions in mm.)

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