

# Twin City Fan & Blower

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## *SOUND POWER LEVELS*

### TSL - TUBULAR CENTRIFUGAL FANS



Twin City Fan and Blower certifies that the fans shown herein are licensed to bear the AMCA Seal for Air and Sound. 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.

For Air Performance refer to Bulletin 1001.





**Inlet L<sub>wk</sub> Values (L<sub>wki</sub>) — TSL 122 & 150**

RPM	% WOV	OCTAVE BAND								L <sub>wkA</sub>
		1	2	3	4	5	6	7	8	
4000	90	42	42	42	45	48	46	43	37	52
	80	39	38	39	42	45	43	40	34	49
	70	38	37	36	39	42	40	37	31	46
	60	37	36	34	36	39	37	34	29	43
	50	37	36	34	36	39	37	34	29	43
3500	90	42	42	43	46	48	46	42	36	52
	80	39	39	39	43	45	42	39	33	49
	70	38	37	37	40	42	39	36	30	46
	60	37	35	34	37	39	36	33	27	43
	50	37	35	34	37	39	36	33	27	43
3000	90	42	42	43	47	47	45	41	34	51
	80	39	39	40	44	45	42	37	31	49
	70	38	37	37	41	41	39	34	29	45
	60	37	35	34	38	39	36	32	26	43
	50	37	35	34	38	39	36	32	26	43
2500	90	42	43	45	48	48	45	39	33	52
	80	39	40	42	45	45	42	36	30	49
	70	38	42	39	42	42	39	33	28	46
	60	36	44	37	39	39	36	31	26	43
	50	36	44	37	39	39	36	31	26	43
2000	90	42	45	48	49	49	43	38	32	52
	80	39	42	45	46	46	40	35	29	49
	70	38	48	42	43	42	38	32	27	46
	60	36	54	39	40	39	35	30	25	44
	50	36	54	39	40	39	35	30	25	44
1500	90	44	48	49	51	49	41	36	30	52
	80	41	45	46	47	45	38	33	27	49
	70	47	48	43	43	42	36	31	25	46
	60	52	50	41	40	39	34	29	23	43
	50	52	50	41	40	39	34	29	23	43
1000	90	46	49	50	51	43	38	33	26	50
	80	44	46	47	47	40	35	30	24	47
	70	54	43	43	44	38	33	28	22	44
	60	64	41	40	40	36	31	26	20	43
	50	64	41	40	40	36	31	26	20	43

**Outlet L<sub>wk</sub> Values (L<sub>wko</sub>) — TSL 122 & 150**

RPM	% WOV	OCTAVE BAND								L <sub>wkA</sub>
		1	2	3	4	5	6	7	8	
4000	90	69	55	50	54	53	51	45	37	58
	80	65	51	46	50	48	45	39	31	53
	70	64	51	45	49	48	44	38	30	52
	60	61	50	43	45	44	41	36	29	49
	50	61	49	43	45	44	41	35	28	48
3500	90	66	54	51	54	53	50	44	35	57
	80	62	50	47	50	48	44	38	29	52
	70	62	49	46	49	47	44	37	29	51
	60	59	48	44	45	44	41	34	27	48
	50	59	48	44	45	44	40	34	27	48
3000	90	63	52	52	54	53	49	42	33	57
	80	59	48	48	50	47	43	36	27	52
	70	59	48	47	49	46	42	35	27	51
	60	56	46	45	45	43	39	33	26	47
	50	56	46	44	45	43	39	32	26	47
2500	90	57	52	55	54	52	48	42	31	56
	80	55	48	50	49	46	42	34	26	51
	70	55	48	49	48	46	41	34	26	50
	60	54	47	45	45	43	38	32	25	47
	50	54	47	45	45	42	38	31	25	47
2000	90	53	54	55	54	51	47	41	30	56
	80	53	49	50	48	45	40	33	24	50
	70	53	49	49	48	45	39	32	24	50
	60	54	48	45	44	42	37	30	23	46
	50	54	48	45	44	42	36	30	23	46
1500	90	54	58	57	54	51	48	38	29	56
	80	53	50	50	47	44	38	30	21	49
	70	53	50	49	46	43	37	30	21	48
	60	54	47	45	44	41	35	28	21	46
	50	54	47	45	43	40	34	28	21	45
1000	90	58	57	55	52	49	44	32	24	54
	80	51	50	48	46	41	33	25	16	47
	70	51	49	48	45	40	33	25	17	46
	60	50	46	44	42	37	31	24	17	43
	50	50	45	44	42	37	30	24	18	43

The sound power level ratings obtained are in decibels, referred to 10<sup>-12</sup> watts calculated per AMCA Standard 301.

The A-weighted sound ratings obtained have been calculated per AMCA Standard 301.

Values obtained are for inlet L<sub>wiA</sub> sound power levels for Installation Type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

Values obtained are for outlet L<sub>wkoA</sub> sound power levels for Installation Type B: free inlet, ducted outlet. Ratings include the effects of duct end correction.

The AMCA Certified Ratings Seal applies to L<sub>wA</sub>, L<sub>wiA</sub> and L<sub>wkoA</sub> ratings only.

**Inlet L<sub>wk</sub> Values (L<sub>wki</sub>) — TSL 182–245**

RPM	% WOV	OCTAVE BAND								L <sub>wkA</sub>
		1	2	3	4	5	6	7	8	
3500	90	43	44	46	48	49	42	42	37	52
	80	38	40	42	43	43	36	33	28	46
	70	37	39	41	42	43	35	31	27	46
	60	36	37	38	41	43	31	26	23	45
	50	36	37	38	41	43	31	26	23	45
3000	90	43	45	46	49	49	42	42	34	52
	80	38	41	42	43	43	35	32	27	46
	70	37	40	41	42	42	34	30	26	45
	60	36	37	38	42	42	30	26	23	44
	50	36	37	38	42	42	30	26	23	44
2500	90	44	45	46	49	46	42	41	31	51
	80	39	41	41	43	40	34	31	26	44
	70	38	41	40	42	39	33	29	24	43
	60	37	38	38	42	38	29	25	22	42
	50	37	38	38	42	38	29	25	22	42
2000	90	45	46	46	47	43	43	39	29	49
	80	41	42	41	41	37	34	30	24	43
	70	40	41	40	40	36	32	28	23	41
	60	38	38	38	39	33	28	25	20	39
	50	38	38	38	39	33	28	25	20	39
1500	90	46	46	45	45	43	42	35	26	48
	80	42	41	40	39	36	33	28	20	41
	70	41	40	39	38	35	31	26	19	40
	60	39	38	36	36	32	28	23	17	37
	50	39	38	36	36	32	28	23	17	37
1000	90	46	46	45	43	43	40	30	21	47
	80	41	40	39	37	34	30	23	15	39
	70	41	39	38	36	33	29	22	14	38
	60	39	36	35	33	30	25	19	13	35
	50	39	36	35	33	30	25	19	13	35
500	90	46	45	43	43	40	30	21	12	44
	80	40	39	37	34	30	23	15	7	35
	70	39	38	36	33	29	22	14	6	34
	60	36	35	33	30	25	19	13	7	31
	50	36	35	33	30	25	19	13	7	31

**Outlet L<sub>wk</sub> Values (L<sub>wko</sub>) — TSL 182–245**

RPM	% WOV	OCTAVE BAND								L <sub>wkA</sub>
		1	2	3	4	5	6	7	8	
3500	90	58	54	49	49	50	50	45	39	55
	80	54	49	44	44	45	45	36	30	50
	70	53	49	44	43	44	44	35	29	49
	60	48	46	43	42	41	36	30	25	45
	50	48	46	43	42	41	36	30	25	45
3000	90	57	52	48	49	50	49	44	36	55
	80	53	48	44	44	45	43	35	29	49
	70	52	47	43	44	44	41	33	28	48
	60	48	45	42	42	40	35	29	24	44
	50	48	45	42	42	40	35	29	24	44
2500	90	57	52	49	49	50	47	43	33	54
	80	53	47	44	44	45	40	34	27	48
	70	52	47	43	43	44	39	32	26	47
	60	48	45	42	41	39	34	28	22	43
	50	48	45	42	41	39	34	28	22	43
2000	90	59	55	50	49	49	45	40	30	53
	80	54	50	45	44	43	38	32	24	47
	70	54	49	44	43	42	36	30	23	46
	60	51	48	42	40	37	32	26	20	42
	50	51	48	42	40	37	32	26	20	42
1500	90	61	56	49	48	47	44	36	27	52
	80	56	51	43	42	41	36	29	21	45
	70	55	50	42	41	39	34	27	20	44
	60	54	47	40	39	36	30	24	18	41
	50	54	47	40	39	36	30	24	18	41
1000	90	60	53	48	47	46	40	30	22	50
	80	55	47	42	41	38	32	24	17	43
	70	54	46	41	40	37	30	23	16	42
	60	52	43	39	37	33	26	20	15	39
	50	52	43	39	37	33	26	20	15	39
500	90	53	48	47	46	40	30	22	15	46
	80	47	42	41	38	32	24	17	9	39
	70	46	41	40	37	30	23	16	9	38
	60	43	39	37	33	26	20	15	9	34
	50	43	39	37	33	26	20	15	9	34

The sound power level ratings obtained are in decibels, referred to 10<sup>-12</sup> watts calculated per AMCA Standard 301.

The A-weighted sound ratings obtained have been calculated per AMCA Standard 301.

Values obtained are for inlet L<sub>wiA</sub> sound power levels for Installation Type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

Values obtained are for outlet L<sub>woA</sub> sound power levels for Installation Type B: free inlet, ducted outlet. Ratings include the effects of duct end correction.

The AMCA Certified Ratings Seal applies to L<sub>wA</sub>, L<sub>wiA</sub> and L<sub>woA</sub> ratings only.

**Inlet L<sub>wk</sub> Values (L<sub>wki</sub>) — TSL 270–330**

RPM	% WOV	OCTAVE BAND								L <sub>wkA</sub>
		1	2	3	4	5	6	7	8	
2500	90	44	43	49	48	46	46	46	32	53
	80	39	38	42	41	37	37	37	23	44
	70	38	36	41	40	35	35	34	21	42
	60	38	36	41	39	34	33	31	20	41
	50	39	36	41	39	32	30	26	19	40
2000	90	44	44	49	47	46	46	43	29	52
	80	39	38	42	40	37	37	34	21	43
	70	38	37	41	38	35	35	32	19	42
	60	38	37	41	37	33	32	28	18	40
	50	39	36	41	36	31	29	24	17	38
1500	90	44	47	49	46	46	45	36	25	51
	80	39	41	42	38	38	37	28	19	43
	70	38	40	41	36	36	35	26	17	41
	60	38	39	41	35	34	32	24	16	39
	50	38	39	40	33	31	28	22	15	37
1000	90	47	48	48	48	45	41	31	22	50
	80	41	42	41	41	38	34	25	17	43
	70	40	41	40	39	36	32	23	15	41
	60	39	40	39	37	35	31	22	15	39
	50	38	40	38	35	33	28	21	14	38
500	90	49	50	51	46	42	33	25	17	48
	80	42	43	43	39	34	27	19	11	40
	70	40	41	41	37	32	25	17	9	38
	60	40	40	40	36	32	25	16	9	38
	50	39	38	37	35	31	24	15	7	36

**Outlet L<sub>wk</sub> Values (L<sub>wko</sub>) — TSL 270–330**

RPM	% WOV	OCTAVE BAND								L <sub>wkA</sub>
		1	2	3	4	5	6	7	8	
2500	90	52	51	53	52	50	47	43	35	55
	80	46	45	46	46	43	40	34	27	48
	70	44	43	45	44	41	38	32	25	46
	60	44	42	43	43	40	36	30	24	45
	50	43	42	41	41	38	34	28	23	43
2000	90	52	51	53	52	49	46	41	32	54
	80	46	45	46	45	42	38	32	25	47
	70	44	43	45	43	40	36	30	23	45
	60	44	42	43	42	39	35	29	23	44
	50	43	41	41	40	37	32	27	22	42
1500	90	52	53	53	51	48	44	38	29	53
	80	46	47	48	44	41	36	30	22	46
	70	45	45	46	43	39	34	28	21	45
	60	44	44	44	41	38	33	27	21	43
	50	43	42	42	39	36	31	25	20	41
1000	90	56	56	54	50	47	41	33	24	52
	80	50	51	48	43	40	34	26	19	46
	70	48	49	46	42	38	32	25	17	44
	60	48	48	44	40	37	31	24	17	42
	50	46	46	42	38	35	30	23	17	41
500	90	59	55	51	49	42	34	26	19	49
	80	53	49	44	41	35	27	19	13	42
	70	51	47	43	40	33	25	18	11	41
	60	50	46	41	38	32	25	17	11	39
	50	48	43	39	36	31	24	17	11	37

The sound power level ratings obtained are in decibels, referred to 10<sup>-12</sup> watts calculated per AMCA Standard 301.

The A-weighted sound ratings obtained have been calculated per AMCA Standard 301.

Values obtained are for inlet L<sub>wiA</sub> sound power levels for Installation Type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

Values obtained are for outlet L<sub>wO</sub>A sound power levels for Installation Type B: free inlet, ducted outlet. Ratings include the effects of duct end correction.

The AMCA Certified Ratings Seal applies to L<sub>wA</sub>, L<sub>wiA</sub> and L<sub>wO</sub>A ratings only.

### Inlet L<sub>wk</sub> Values (L<sub>wki</sub>) — TSL 365–890

RPM	% WOV	OCTAVE BAND								L <sub>wkA</sub>
		1	2	3	4	5	6	7	8	
1500	90	43	51	54	43	41	42	35	25	49
	80	36	44	48	37	34	34	26	18	43
	70	35	43	46	35	33	32	24	16	41
	60	36	41	43	32	29	26	20	14	37
	50	36	40	42	31	28	25	19	13	36
1000	90	45	53	48	42	42	40	29	21	47
	80	39	47	42	35	35	31	21	14	40
	70	37	45	40	34	33	29	19	13	38
	60	37	42	37	30	28	23	16	10	34
	50	37	41	36	30	27	22	16	10	33
500	90	46	49	43	43	41	27	20	13	45
	80	41	45	37	35	33	21	14	7	37
	70	40	43	36	33	31	19	13	6	35
	60	36	37	32	28	24	17	11	5	30
	50	36	37	32	28	24	17	11	5	30
150	90	45	43	43	30	21	15	8	2	36
	80	40	35	35	23	16	9	2	-4	29
	70	39	34	33	21	15	8	2	-5	27
	60	34	29	25	19	12	7	1	-4	21
	50	34	29	25	19	12	7	1	-4	21

### Outlet L<sub>wk</sub> Values (L<sub>wko</sub>) — TSL 365–890

RPM	% WOV	OCTAVE BAND								L <sub>wkA</sub>
		1	2	3	4	5	6	7	8	
1500	90	50	48	47	47	44	42	35	26	49
	80	45	43	42	41	38	35	28	21	43
	70	44	42	40	40	37	33	27	20	42
	60	43	39	37	36	34	30	25	20	39
	50	42	39	36	35	34	30	24	20	38
1000	90	50	48	47	45	43	40	29	22	48
	80	46	43	41	39	37	32	24	17	41
	70	45	42	40	38	35	30	22	17	40
	60	43	39	37	36	33	27	22	18	38
	50	43	39	36	35	33	27	22	18	37
500	90	51	46	46	43	40	28	21	15	44
	80	46	40	40	37	34	23	17	13	39
	70	46	40	40	36	32	22	17	13	38
	60	47	40	41	35	30	23	18	14	37
	50	47	40	41	35	30	23	18	14	37
150	90	46	44	43	30	23	17	11	5	36
	80	40	38	36	25	19	14	10	7	30
	70	40	37	35	24	18	14	11	7	29
	60	41	37	31	24	19	15	11	7	28
	50	41	37	31	24	19	15	11	7	28

The sound power level ratings obtained are in decibels, referred to 10<sup>-12</sup> watts calculated per AMCA Standard 301.

The A-weighted sound ratings obtained have been calculated per AMCA Standard 301.

Values obtained are for inlet L<sub>wiA</sub> sound power levels for Installation Type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

Values obtained are for outlet L<sub>woA</sub> sound power levels for Installation Type B: free inlet, ducted outlet. Ratings include the effects of duct end correction.

The AMCA Certified Ratings Seal applies to L<sub>wA</sub>, L<sub>wiA</sub> and L<sub>woA</sub> ratings only.

# M Capacity Fraction

CFM	TOTAL PRESSURE AT DENSITY																		
	1/4	3/8	1/2	5/8	3/4	7/8	1	1¼	1½	2	2½	3	3½	4	4½	5	5½	6	6½
100	8	11	14	16	18	19	20	22	24	26	28	30	31	32	33	34	35	36	36
150	10	13	16	18	19	21	22	24	25	28	30	31	33	34	35	36	37	37	38
200	11	14	17	19	21	22	23	25	27	29	31	33	34	35	36	37	38	39	39
300	13	16	19	21	22	24	25	27	28	31	33	34	36	37	38	39	40	40	41
500	15	18	21	23	24	26	27	29	31	33	35	37	38	39	40	41	42	43	43
750	17	20	23	25	26	28	29	31	32	35	37	38	40	41	42	43	44	44	45
1000	18	21	24	26	28	29	30	32	34	36	38	40	41	42	43	44	45	46	46
1500	20	23	26	28	29	31	32	34	35	38	40	41	43	44	45	46	47	47	48
2000	21	24	27	29	31	32	33	35	37	39	41	43	44	45	46	47	48	49	49
3000	23	26	29	31	32	34	35	37	38	41	43	44	46	47	48	49	50	50	51
5000	25	28	31	33	34	36	37	39	41	43	45	47	48	49	50	51	52	53	53
7500	27	30	33	35	36	38	39	41	42	45	47	48	50	51	52	53	54	54	55
10000	28	31	34	36	38	39	40	42	44	46	48	50	51	52	53	54	55	56	56
15000	30	33	36	38	39	41	42	44	45	48	50	51	53	54	55	56	57	57	58
20000	31	34	37	39	41	42	43	45	47	49	51	53	54	55	56	57	58	59	59
30000	33	36	39	41	42	44	45	47	48	51	53	54	56	57	58	59	60	60	61
50000	35	38	41	43	44	46	47	49	51	53	55	57	58	59	60	61	62	63	63
75000	37	40	43	45	46	48	49	51	52	55	57	58	60	61	62	63	64	64	65
100000	38	41	44	46	48	49	50	52	54	56	58	60	61	62	63	64	65	66	66
150000	40	43	46	48	49	51	52	54	55	58	60	61	63	64	65	66	67	67	68
200000	41	44	47	49	51	52	53	55	57	59	61	63	64	65	66	67	68	69	69

CFM	TOTAL PRESSURE AT DENSITY																		
	7	8	9	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
100	37	38	39	40	42	43	44	45	46	47	48	48	49	50	50	51	51	52	52
150	39	40	41	42	43	45	46	47	48	49	49	50	51	51	52	52	53	53	54
200	40	41	42	43	45	46	47	48	49	50	51	51	52	53	53	54	54	55	55
300	42	43	44	45	46	48	49	50	51	52	52	53	54	54	55	55	56	56	57
500	44	45	46	47	49	50	51	52	53	54	55	55	56	57	57	58	58	59	59
750	46	47	48	49	50	52	53	54	55	56	56	57	58	58	59	59	60	60	61
1000	47	48	49	50	52	53	54	55	56	57	58	58	59	60	60	61	61	62	62
1500	49	50	51	52	53	55	56	57	58	59	59	60	61	61	62	62	63	63	64
2000	50	51	52	53	55	56	57	58	59	60	61	61	62	63	63	64	64	65	65
3000	52	53	54	55	56	58	59	60	61	62	62	63	64	64	65	65	66	66	67
5000	54	55	56	57	59	60	61	62	63	64	65	65	66	67	67	68	68	69	69
7500	56	57	58	59	60	62	63	64	65	66	66	67	68	68	69	69	70	70	71
10000	57	58	59	60	62	63	64	65	66	67	68	68	69	70	70	71	71	72	72
15000	59	60	61	62	63	65	66	67	68	69	69	70	71	71	72	72	73	73	74
20000	60	61	62	63	65	66	67	68	69	70	71	71	72	73	73	74	74	75	75
30000	62	63	64	65	66	68	69	70	71	72	72	73	74	74	75	75	76	76	77
50000	64	65	66	67	69	70	71	72	73	74	75	75	76	77	77	78	78	79	79
75000	66	67	68	69	70	72	73	74	75	76	76	77	78	78	79	79	80	80	81
100000	67	68	69	70	72	73	74	75	76	77	78	78	79	80	80	81	81	82	82
150000	69	70	71	72	73	75	76	77	78	79	79	80	81	81	82	82	83	83	84
200000	70	71	72	73	75	76	77	78	79	80	81	81	82	83	83	84	84	85	85



**Twin City Fan & Blower**

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