

# Sound Transmission Class Silencers STC Series



## Performance Data - Model R-STC

### Dimensional Data — Imperial (in.) / Metric (mm)

	Available Duct Widths											Duct Height	Silencer Length
Imperial	6	12-13	24-26	36-39	48-52	60-65	72-78	84-91	96-104	108-117	120-240	6-144	36-144
Metric	150	300-325	600-650	900-975	1200-1300	1500-1625	1800-1950	2100-2275	2400-2600	2700-2925	3000-6000	150-3600	900-3600

### Dynamic Insertion Loss (DIL)

STC Rating	Length in. (mm)	Face Velocity fpm (m/s)	Pressure Drop in. w.g. (Pa)	Octave Band Dynamic Insertion Loss (dB)							
				1	2	3	4	5	6	7	8
				63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
STC40	84 (2100)	+750 (+3.81)	0.31 (77)	11	18	27	46	51	53	45	31
		+500 (+2.54)	0.14 (35)	12	19	28	47	51	53	45	31
		0	0.00	12	20	29	47	51	53	44	29
		-500 (-2.54)	0.14 (35)	14	22	31	48	51	53	44	28
		-750 (-3.81)	0.31 (77)	15	23	32	48	51	52	43	28
STC45	108 (2700)	+750 (+3.81)	0.33 (82)	15	25	33	54	54	55	54	37
		+500 (+2.54)	0.15 (37)	16	25	34	54	54	55	54	37
		0	0.00	16	26	35	53	54	55	54	36
		-500 (-2.54)	0.15 (37)	19	28	36	53	54	55	53	35
		-6000 (-30.48)	0.33 (82)	20	29	38	53	54	55	53	35
STC50	120 (3000)	+750 (+3.81)	0.34 (85)	18	29	37	55	55	55	55	40
		+500 (+2.54)	0.16 (39)	18	28	37	55	55	55	55	40
		0	0.00	19	29	38	55	55	55	55	40
		-500 (-2.54)	0.16 (39)	21	31	39	55	55	55	55	39
		-6000 (-30.48)	0.34 (85)	23	32	41	55	55	55	55	39
STC55	144 (3600)	+750 (+3.81)	0.36 (90)	25	36	45	55	55	55	55	46
		+500 (+2.54)	0.17 (41)	24	36	45	55	55	55	55	46
		0	0.00	25	36	46	55	55	55	55	47
		-500 (-2.54)	0.17 (41)	26	38	46	55	55	55	55	47
		-6000 (-30.48)	0.36 (90)	29	39	47	55	55	55	55	47

### Generated Noise (dB)

Length	Face Velocity fpm (m/s)	Octave Band Generated Noise (dB re 10 <sup>-12</sup> Watts)							
		1	2	3	4	5	6	7	8
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
All Lengths	+750 (+3.81)	50	38	30	38	38	36	32	28
	+500 (+2.54)	39	24	15	28	31	25	18	14
	-500 (-2.54)	32	20	15	29	34	31	28	18
	-750 (-3.81)	44	21	24	37	41	41	41	32

### Generated Noise Corrections (dB)

Silencer Face Area (ft <sup>2</sup> ) (+)	0.5	1	2	4	8	16	32	64	128
dB Addition or Reduction (-)	-9	-6	-3	0	+3	+6	+9	+12	+15

### Weights (lbs.)

Model	Length (in)	Width (in)	12				24				36				48											
			18	24	30	36	42	48	18	24	30	36	42	48	18	24	30	36	42	48						
R-STC40	84		142	173	202	231	260	289	221	261	302	343	385	427	300	352	405	457	510	562	379	443	508	572	636	700
R-STC45	108		339	405	471	537	603	669	497	579	660	741	822	903	654	750	846	942	1038	1134	813	924	1035	1146	1256	1365
R-STC50	120		428	498	565	634	703	774	583	670	754	839	925	1012	738	842	943	1044	1147	1250	893	1013	1131	1249	1368	1485
R-STC55	144		506	592	670	751	832	917	694	797	897	996	1097	1201	879	1003	1123	1244	1363	1487	1063	1209	1347	1488	1630	1768

### Performance Notes:

- Data derived in strict accordance with ASTM E477-13.
- "+" indicates data for forward flow (supply).
- "-" indicates data for reverse flow (return).
- Dynamic Insertion Loss is limited to 55 dB due to flanking. Contact Price if insertion loss above 55 dB is required.
- Generated noise data is based on a face area of 4 ft<sup>2</sup>. Corrections in chart provided must be applied for other sizes.
- Performance data is based on a 24" x 24" component.
- For performance data specific to a size not cataloged, please use Price All-In-One Selection Software.
- STC ratings are determined according to ASTM E413.