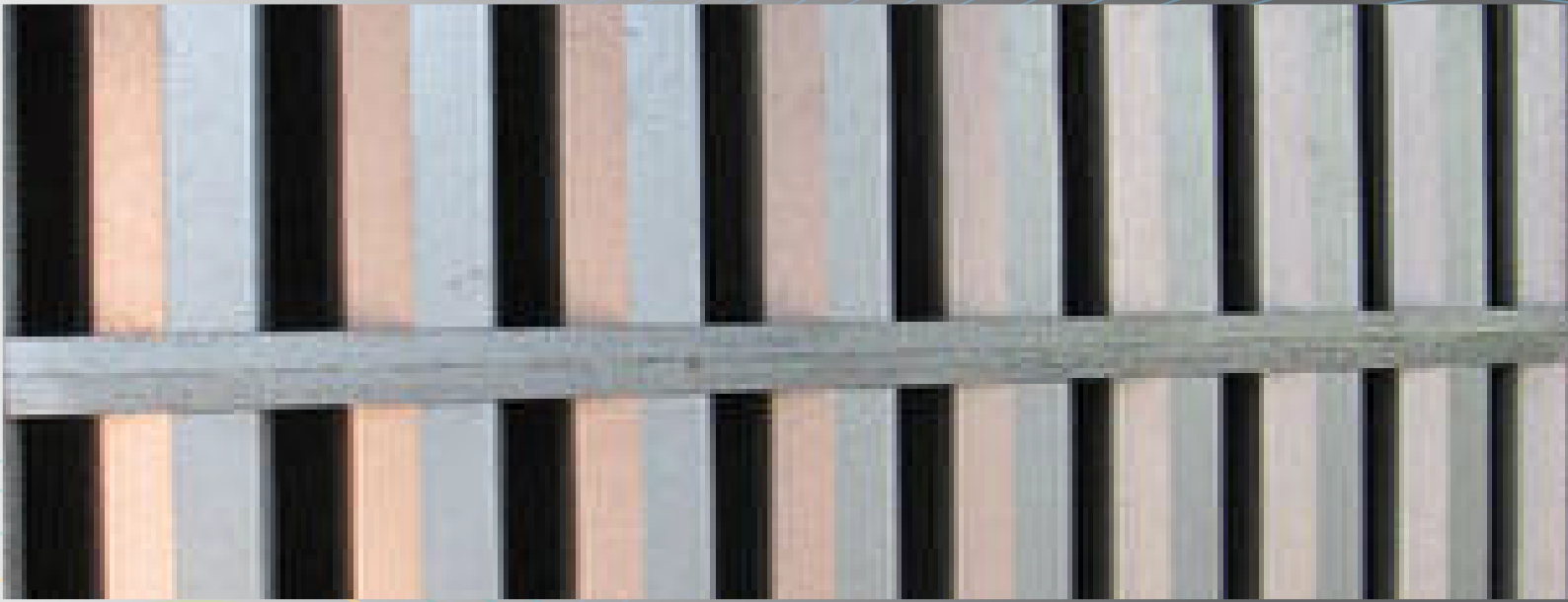


QUICKTECH

(Co. No. 270041 H)

Established since 1993



Duct Silencer
NOISE CONTROL
www.quicktech.com.my

01 Duct Silencer



Application

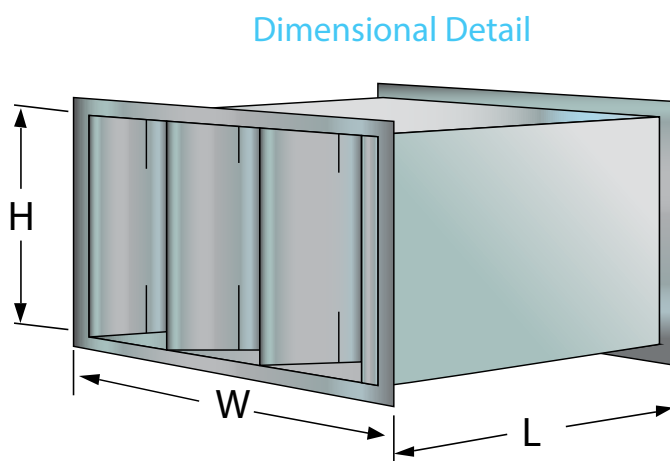
QUICKTECH acoustic duct silencers are intended for sound attenuation in ventilation, air conditioning systems, generator sets, motor cooling fan and other oil and gas, building and industrial application.

The rectangular acoustic silencer consists of the housing and internal baffles. The housing is made of galvanised steel sheet and has frames at the ends made of sheet metal profiles. The baffle is rounded on one side and consists of the frame made of galvanised steel sheet and sound-absorbing insert that absorbs the acoustic energy.

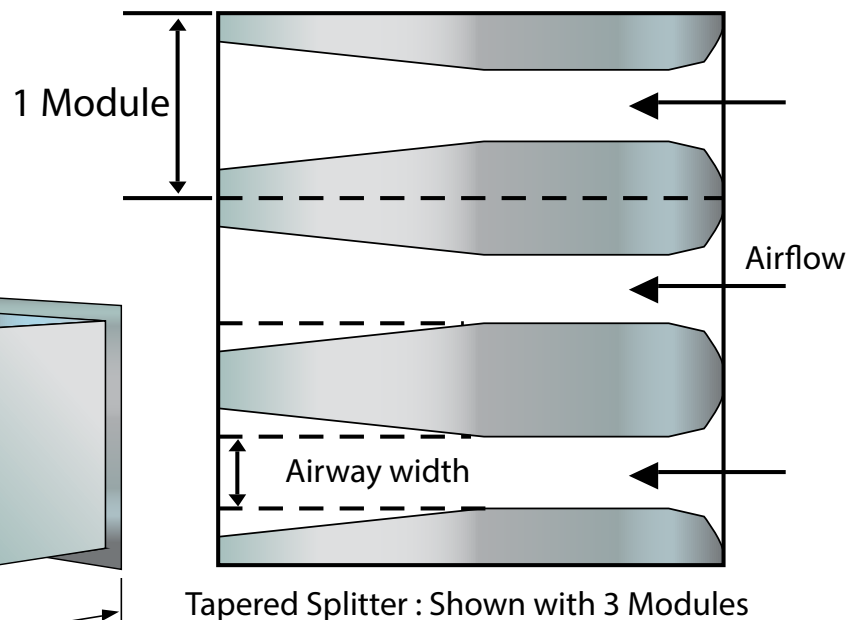
Construction

QUICKTECH silencers are available in two models, D200 and D300. Our standard silencer offers up to eight different length, 600mm to 3000mm, for selection. The smooth inlet and static regain discharge design will minimize the adverse aero-acoustic system effects.

Construction Detail



Dimensional Detail



Tapered Splitter : Shown with 3 Modules



Standard Construction

- Maximum Differential Pressure: 8in.wg (2000 Pa)
- Outer Casing: 0.8mm galvanised steel (or 1.2mm for larger size)
- Perforated material: 0.5mm galvanised steel
- Fill material: Inorganic and of sufficient density acoustic media
- Connection: TDC or TDF joints

Selection Guide

QUICKTECH rectangular silencers are engineered to provide a highly configurable noise control solution tuned to meet project specific acoustic and aerodynamic requirements. The right silencer selection can be made with the help of our engineers or by following below selection steps.

- Establish the Noise Criteria Level. Refer NC chart.
- Determine noise source.
- Calculate the level of difference between noise source and noise criteria level. This is also known as required attenuation.
- Select suitable silencer that can meet the required attenuation requirement.

Noise Criterion	Octave band Center Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
	Sound Pressure Levels (dB)							
NC-15	47	36	29	22	17	14	12	11
NC-20	51	40	33	26	22	19	17	16
NC-25	54	44	37	31	27	24	22	21
NC-30	57	48	41	35	31	29	28	27
NC-35	60	52	45	40	36	34	33	32
NC-40	64	56	50	45	41	39	38	37
NC-45	67	60	54	49	46	44	43	42
NC-50	71	64	58	54	51	49	48	47
NC-55	74	67	62	58	56	54	53	52
NC-60	77	71	67	63	61	59	58	57
NC-65	80	75	71	68	66	64	63	62
NC-70	83	79	75	72	71	70	69	68

Performance Data

[QTH Model D200]

Type 75 Length (mm)	Octave Band Centre Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	K-Factor
600	4	7	13	29	39	27	26	18	2.72
900	5	10	18	33	42	32	28	20	3.24
1200	5	13	23	40	47	36	32	23	3.88
1500	6	16	28	45	53	42	33	24	4.13
1800	7	18	33	52	54	49	36	26	4.41
2100	9	21	38	56	57	55	38	28	4.94
2400	10	24	43	60	60	60	40	30	5.46
3000	11	28	48	60	60	60	43	32	6.37

Type 150 Length (mm)	Octave Band Centre Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	K-Factor
600	2	4	9	21	24	17	12	9	0.64
900	3	6	14	26	29	21	14	11	0.76
1200	4	8	18	30	33	24	16	13	0.89
1500	5	11	24	35	38	27	18	15	1.01
1800	5	14	30	40	44	31	20	17	1.08
2100	6	16	36	45	50	34	22	19	1.19
2400	7	18	41	49	55	37	24	20	1.29
3000	9	20	44	55	59	44	27	22	1.51

Type 100 Length (mm)	Octave Band Centre Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	K-Factor
600	3	7	13	26	37	24	21	15	1.67
900	4	9	17	31	40	29	24	17	1.95
1200	5	11	21	36	45	33	26	19	2.13
1500	6	14	26	42	49	39	28	21	2.35
1800	6	16	31	48	53	45	31	23	2.74
2100	7	19	36	53	57	51	33	25	2.98
2400	8	21	41	57	60	56	35	26	3.24
3000	9	24	44	60	60	57	40	29	3.64

Type 175 Length (mm)	Octave Band Centre Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	K-Factor
600	2	4	9	19	21	15	10	7	0.43
900	3	6	13	23	26	18	12	9	0.52
1200	4	8	17	27	30	21	14	12	0.60
1500	5	10	22	31	35	24	16	13	0.68
1800	5	13	27	36	40	27	19	15	0.79
2100	6	15	32	41	45	30	22	17	0.86
2400	7	16	36	45	55	33	24	18	0.92
3000	8	19	38	49	54	39	27	20	1.08

Type 125 Length (mm)	Octave Band Centre Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	K-Factor
600	3	6	11	24	31	20	17	12	0.96
900	4	8	16	29	35	25	19	14	1.16
1200	5	10	20	33	39	29	21	16	1.34
1500	6	13	25	39	44	33	23	18	1.45
1800	6	15	30	44	49	38	26	20	1.71
2100	7	17	36	51	53	48	28	22	1.88
2400	8	19	41	57	57	57	30	23	2.04
3000	9	22	44	60	60	54	34	26	2.35

Type 200 Length (mm)	Octave Band Centre Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	K-Factor
600	2	4	9	16	19	12	6	4	0.34
900	3	6	12	20	23	15	9	6	0.41
1200	4	8	15	23	27	17	12	10	0.47
1500	5	10	19	27	31	20	15	11	0.56
1800	5	11	23	32	36	23	18	12	0.58
2100	6	12	27	36	41	26	21	14	0.63
2400	6	13	30	40	45	29	24	16	0.68
3000	7	17	32	43	48	33	27	18	0.81

[QTH Model D300]

Type 150 Length (mm)	Octave Band Centre Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	K-Factor
600	6	10	12	15	23	15	12	11	2.81
900	8	13	17	21	28	21	16	14	2.84
1200	9	16	23	27	31	27	21	16	2.88
1500	11	18	28	34	38	32	25	19	2.91
1800	12	21	32	39	44	35	29	21	2.94
2100	13	23	37	44	49	41	33	24	2.96
2400	14	24	42	48	53	46	36	26	2.98
3000	18	30	50	60	60	57	43	31	3.05

Type 250 Length (mm)	Octave Band Centre Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	K-Factor
600	2	8	10	16	17	11	10	7	1.12
900	4	10	14	21	22	14	12	9	1.13
1200	5	12	19	26	23	18	15	10	1.15
1500	6	14	22	30	29	21	17	12	1.17
1800	8	16	25	35	34	23	19	12	1.19
2100	10	18	28	40	38	26	20	15	1.20
2400	11	20	30	45	42	28	21	17	1.20
3000	14	24	41	49	51	34	22	20	1.22

Type 200 Length (mm)	Octave Band Centre Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	K-Factor
600	6	10	9	21	24	12	13	13	1.63
900	7	12	14	26	28	17	15	14	1.65
1200	8	14	20	30	32	20	18	16	1.67
1500	9	16	23	35	36	25	20	18	1.69
1800	12	18	28	39	40	29	21	17	1.71
2100	13	20	32	44	45	33	24	19	1.73
2400	13	21	36	49	49	37	26	20	1.74
3000	14	25	47	55	55	45	30	22	1.76

Type 300 Length (mm)	Octave Band Centre Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	K-Factor
600	2	5	9	12	9	10	10	9	0.81
900	3	7	13	16	14	12	11	10	0.82
1200	4	12	16	22	19	15	12	11	0.83
1500	5	13	20	27	24	17	15	12	0.83
1800	6	14	22	30	30	19	16	13	0.84
2100	8	16	26	35	36	23	17	14	0.85
2400	9	17	30	40	42	26	18	14	0.85
3000	12	20	35	42	45	27	19	16	0.86

The values tabled in this performance data are insertion loss as defined in BS EN ISO 7235 : 2010

Acoustics - Laboratory measurement procedure for ducted silencers.