Air Distribution
Products Catalogue

SILENCER

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- Supply Air Grilles
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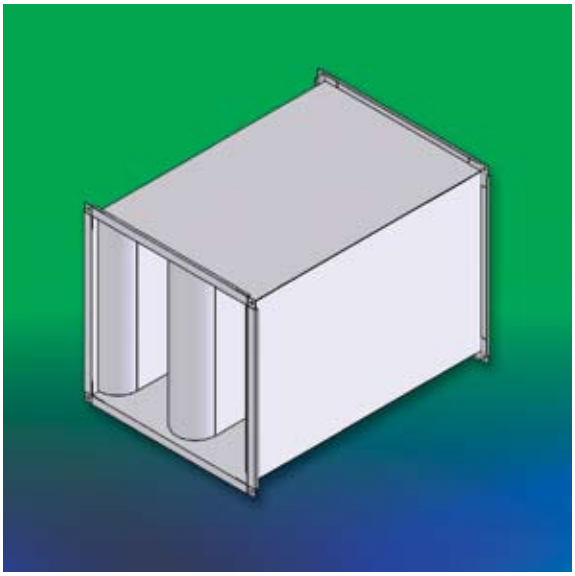
SLR-LP Rectangular Silencer



Description

ASLI Rectangular Silencer (SLR-LP) is designed for intake or exhaust fans of high air velocity and low pressure drop. Large equipment usually requires a substantial amount of airflow but untreated fan areas can create, and even spread, noise unnecessarily. The acoustic material, fibre glass in the baffles reduces the noise transmitted through the duct work. Perforated metal sheet protects the fibre glass from being eroded by air flow. The baffles are aerodynamically shaped to minimize turbulent flow and pressure drop.

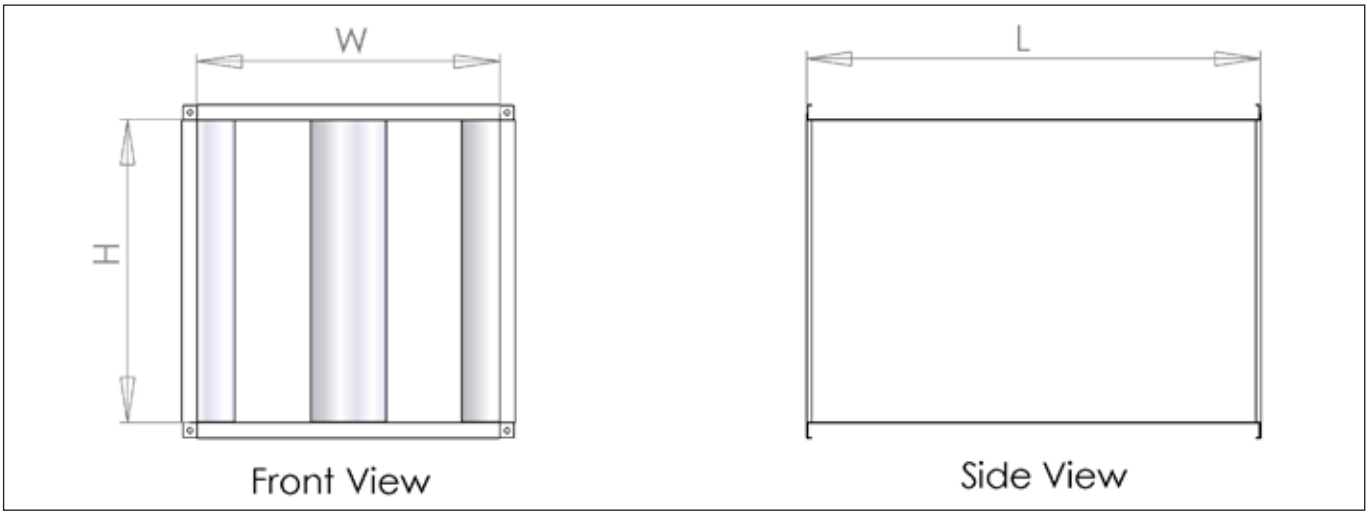
Material

- Outer casing: 1.0mm thickness galvanized steel.
- Baffle: 0.7mm thickness perforated galvanized steel.
- Acoustical material: fiber glass.

Surface Finish

- Mill galvanized.

Construction Illustration



SLR-LP Table 1: Insertion Loss

Length (mm)	Frequency (Hz) / Face Velocity (m/s)	63	125	250	500	1000	2000	4000	8000
		Insertion Loss (dB)							
900	-10	1	5	7	16	29	25	13	11
	0	2	3	8	16	20	21	18	12
	10	2	2	6	12	18	21	18	14
1500	-10	2	12	15	33	36	38	18	15
	0	3	9	15	30	38	37	25	15
	10	3	7	12	22	33	35	24	17
2100	-10	3	14	20	43	44	50	20	13
	0	4	11	23	41	49	44	28	14
	10	4	11	16	30	44	42	28	18
3000	-10	9	21	24	53	60	60	33	22
	0	7	16	24	46	60	56	40	22
	10	9	17	17	36	62	58	40	26

- Positive face velocity indicates forward flow while negative face velocity indicates reverse flow.
- Forward flow occurs when the air flow is in the same direction as the noise transmitted.
- Reverse flow occurs when the air flow is opposite the noise transmitted direction.
- Zero face velocity indicates static insertion loss; the rest are dynamic insertion losses.

SLR-LP Rectangular Silencer

■ SLR-LP Table 2: Air Generated Sound Power Level

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Face Velocity (m/s)	Air Flow Generated Sound Power Level (dB)							
-10	55	54	58	55	61	63	55	48
-5	38	42	46	40	44	43	39	28
5	40	37	36	38	34	37	31	33
10	54	53	51	49	47	56	49	46

• The above performance data is generated from 0.36m^2 face area silencer. Please use the correct factor at table 3 for other face area silencers.

■ SLR-LP Table 3: Correction Factor for Air Generated Sound Power Level

Face Area (m^2)	0.09	0.19	0.36	0.74	1.49	2.97	5.95	11.90
Correction Factor (dB)	-6	-3	0	+3	+6	+9	+12	+15

■ SLR-LP Table 4: Pressure Drop

Length (mm)	Face Velocity (m/s)					
	2.5	5.0	7.5	10.0	12.5	15.0
	Dynamic Pressure Drop (Pa)					
900	5	17	36	63	99	143
1500	5	19	43	75	118	169
2100	7	29	63	114	176	254
3000	7	29	68	118	186	268

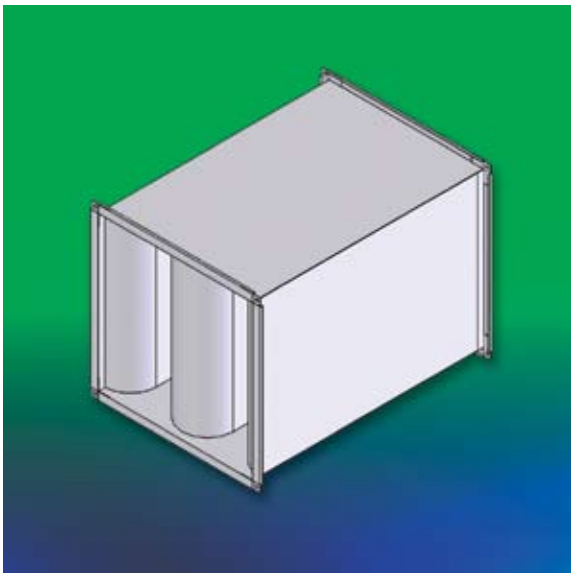
• Shaded regions in table 4 represent a design condition that may have negative consequences for acoustically sensitive applications.

■ SLR-LP Order Code

Model	Width, W (mm)	Height, H (mm)	Length, L (mm)
SLR-LP	600	600	900

Example: SLR-LP W600XH600XL900mm

SLR-MP Rectangular Silencer



Description

ASLI Silencer (SLR-MP) is designed for intake or exhaust fans of medium air velocity and medium pressure drop. Large equipment usually requires a substantial amount of airflow but untreated fan areas can create, and even spread, noise unnecessarily. The acoustic material, fibre glass in the baffles reduces the noise transmitted through the duct work. Perforated metal sheet protects the fibre glass from being eroded by air flow. The baffles are aerodynamically shaped to minimize turbulent flow and pressure drop.

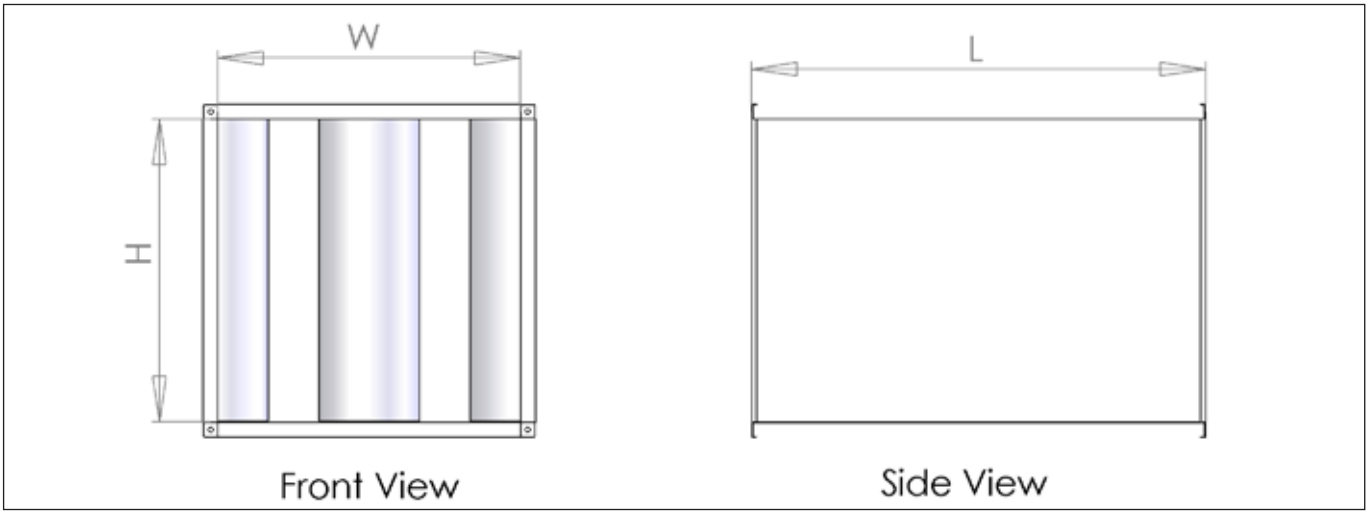
Material

- Outer casing: 1.0mm thickness galvanized steel.
- Baffle: 0.7mm thickness perforated galvanized steel.
- Acoustical Material: fiber glass.

Surface Finish

- Mill galvanized.

Construction Illustration



SLR-MP Table 1: Insertion Loss

Length (mm)	Frequency (Hz) / Face Velocity (m/s)	63	125	250	500	1000	2000	4000	8000
		Insertion Loss (dB)							
900	-6.25	3	9	14	21	21	17	12	11
	0	3	9	14	22	24	18	17	18
	6.25	3	8	13	20	22	16	14	13
1500	-6.25	4	17	21	34	36	24	16	13
	0	5	17	21	36	40	25	22	22
	6.25	5	15	19	32	37	24	19	17
2100	-6.25	5	23	28	37	42	32	20	16
	0	7	23	28	40	48	33	27	26
	6.25	7	20	26	36	44	32	24	20
3000	-6.25	7	30	37	50	58	60	25	18
	0	9	30	38	55	60	44	36	30
	6.25	9	27	35	50	61	41	32	23

- Positive face velocity indicates forward flow while negative face velocity indicates reverse flow.
- Forward flow occurs when the air flow is in the same direction as the noise transmitted.
- Reverse flow occurs when the air flow is opposite the noise transmitted direction.
- Zero face velocity indicates static insertion loss; the rest are dynamic insertion losses.

SLR-MP Rectangular Silencer

■ SLR-MP Table 2: Air Generated Sound Power Level

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Face Velocity (m/s)	Air Flow Generated Sound Power Level (dB)							
-6.25	60	58	54	54	54	55	47	37
-3.75	58	49	44	39	36	32	27	24
3.75	59	39	34	28	29	29	28	27
6.25	61	53	44	43	46	47	41	35

• The above performance data is generated from 0.36m^2 face area silencer. Please use the correct factor at table 3 for other face area silencers.

■ SLR-MP Table 3: Correction Factor for Air Generated Sound Power Level

Face Area (m^2)	0.09	0.19	0.36	0.74	1.49	2.97	5.95	11.90
Correction Factor (dB)	-6	-3	0	+3	+6	+9	+12	+15

■ SLR-MP Table 4: Pressure Drop

Length (mm)	Face Velocity (m/s)					
	1.25	2.5	3.75	5.00	6.25	7.5
	Dynamic Pressure Drop (Pa)					
900	2	12	29	51	80	114
1500	5	17	41	70	111	159
2100	5	22	48	87	135	196
3000	7	27	60	106	167	242

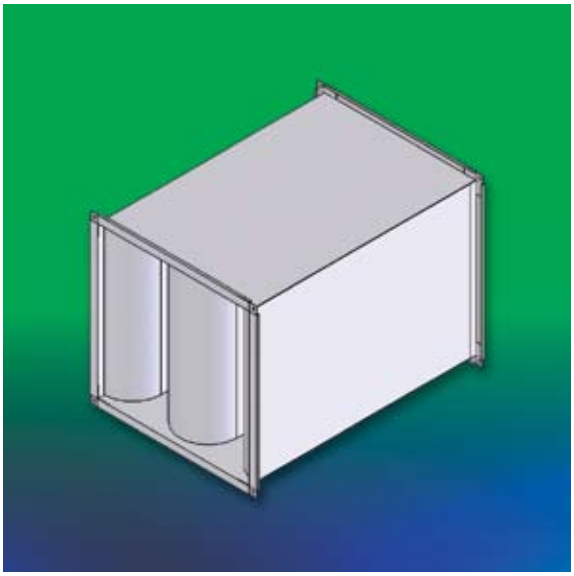
• Shaded regions in table 4 represent a design condition that may have negative consequences for acoustically sensitive applications.

■ SLR-MP Order Code

Model	Width, W (mm)	Height, H (mm)	Length, L (mm)
SLR-MP	600	600	900

Example: SLR-MP W600XH600XL900mm

SLR-HP Rectangular Silencer



Description

ASLI Silencer (SLR-HP) is designed for intake or exhaust fans of low air velocity and high pressure drop. Large equipment usually requires a substantial amount of airflow but untreated fan areas can create, and even spread, noise unnecessarily. The acoustic material, fibre glass in the baffles reduces the noise transmitted through the duct work. Perforated metal sheet protects the fibre glass from being eroded by air flow. The baffles are aerodynamically shaped to minimize turbulent flow and pressure drop.

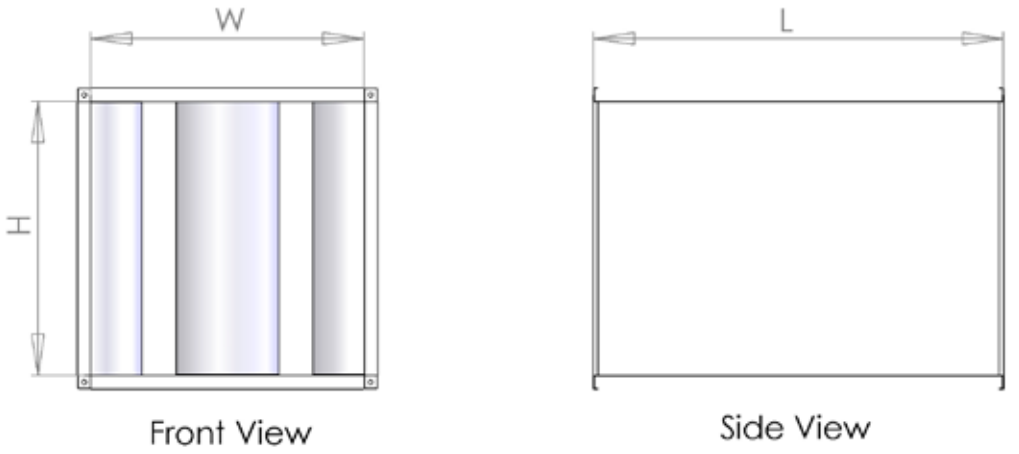
Material

- Outer casing: 1.0mm thickness galvanized steel.
- Baffle: 0.7mm thickness perforated galvanized steel.
- Acoustical Material: fiber glass.

Surface Finish

- Mill Galvanized.

Construction Illustration



SLR-HP Table 1: Insertion Loss

Length (mm)	Frequency (Hz) / Face Velocity (m/s)	63	125	250	500	1000	2000	4000	8000
		Insertion Loss (dB)							
900	-2.5	6	12	20	28	34	30	22	19
	0	6	11	20	29	32	32	23	17
	2.5	6	11	20	29	34	34	22	19
1500	-2.5	11	19	30	43	48	46	28	22
	0	11	18	29	42	46	46	30	22
	2.5	8	17	28	41	47	46	28	23
2100	-2.5	15	24	41	49	54	50	35	26
	0	14	27	39	50	53	50	37	28
	2.5	11	24	38	48	54	50	35	28
3000	-2.5	19	30	49	59	60	60	42	32
	0	18	34	48	61	60	60	48	34
	2.5	14	30	47	62	60	60	46	35

- Positive face velocity indicates forward flow while negative face velocity indicates reverse flow.
- Forward flow occurs when the air flow is in the same direction as the noise transmitted.
- Reverse flow occurs when the air flow is opposite the noise transmitted direction.
- Zero face velocity indicates static insertion loss; the rest are dynamic insertion losses.

SLR-HP Rectangular Silencer

SLR-HP Table 2: Air Generated Sound Power Level

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Face Velocity (m/s)	Air Flow Generated Sound Power Level (dB)							
-2.5	59	45	39	49	44	40	26	33
2.5	52	42	37	33	36	29	24	28

• The above performance data is generated from 0.36m^2 neck area silencer. Please use the correct factor at table 3 for other face area silencers.

SLR-HP Table 3: Correction Factor for Air Generated Sound Power Level

Face Area (m^2)	0.09	0.19	0.36	0.74	1.49	2.97	5.95	11.90
Correction Factor (dB)	-6	-3	0	+3	+6	+9	+12	+15

SLR-HP Table 4: Pressure Drop

Length (mm)	Face Velocity (m/s)					
	0.63	1.25	1.88	2.50	3.13	3.75
	Dynamic Pressure Drop (Pa)					
900	2	10	22	39	60	89
1500	2	12	27	46	72	106
2100	2	14	31	53	85	123
3000	5	17	39	68	104	150

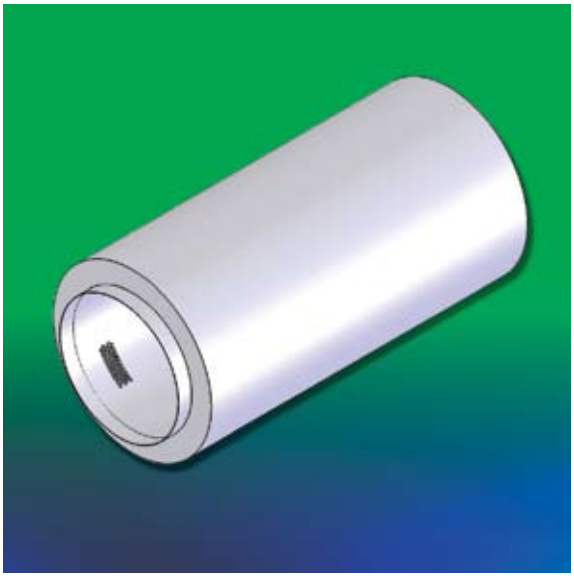
• Shaded regions in table 4 represent a design condition that may have negative consequences for acoustically sensitive applications.

SLR-HP Order Code

Model	Width, W (mm)	Height, H (mm)	Length, L (mm)
SLR-HP	600	600	900

Example: SLR-HP W600XH600XL900mm

SLR-C Round Silencer



Description

ASLI Round Silencer (SLR-C) is designed to attenuate noise in circular ducting. The acoustical material, fiberglass reduces the noise transmitted through the ductwork. Perforated metal sheet protects the fiberglass from being eroded by air flow.

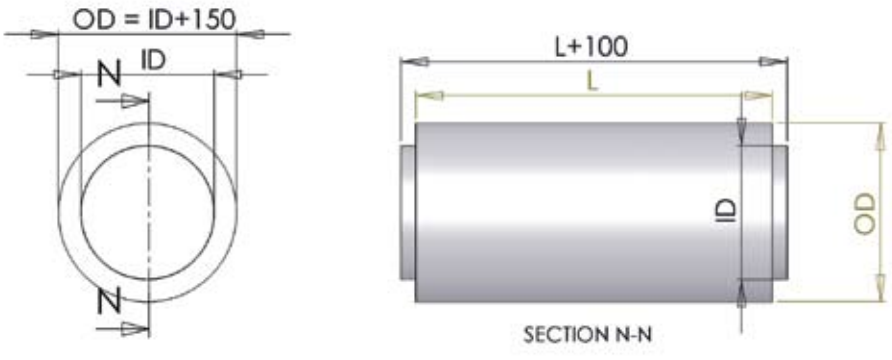
Material

- Casing: 1.0mm galvanized steel.
- Baffle: 0.7mm perforated galvanized.
- Acoustical material: Fiberglass.

Surface Finish

- Mill Galvanized.

SLR-C Physical Dimension Unit:mm



Insertion Loss

ID (mm)	OD (mm)	Length, L (mm)	Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
			Face Velocity (m/s)	Insertion Loss (dB)							
150	300	525	-25	2	2	2	4	3	2	2	1
			0	3	2	3	5	4	4	3	3
			25	2	2	2	4	2	2	1	1
300	450	1050	-25	1	2	4	6	3	3	2	2
			0	2	4	5	8	7	8	5	3
			25	1	2	4	3	3	3	2	2
450	600	1575	-25	2	3	7	8	8	10	8	8
			0	2	4	8	12	11	8	6	6
			25	2	3	7	8	8	10	8	8
600	750	2100	-25	2	4	7	15	8	6	4	3
			0	4	5	8	17	12	7	6	5
			25	2	4	7	15	8	6	4	3
900	1050	3150	-25	1	3	7	15	10	6	2	2
			0	3	5	10	20	7	7	7	8
			25	1	3	7	15	10	6	2	2
1200	1350	4200	-25	1	1	5	3	5	5	1	1
			0	3	4	12	19	5	5	5	5
			25	1	1	5	3	5	5	1	1

- Positive face velocity indicates forward flow while negative face velocity indicates reverse flow.
- Forward flow occurs when the air flow is in the same direction as the noise transmitted.
- Reverse flow occurs when the air flow is opposite the noise transmitted direction.
- Zero face velocity indicates static insertion loss; the rest are dynamic insertion losses.

SLR-C Round Silencer

■ Airflow Generated Sound Power

SLR-C does not have internal components that would cause generated noise. The results of laboratory testing indicate indiscernible differences between the noise generated by the silencer and the noise generated by the connecting duct.

■ Pressure Drop

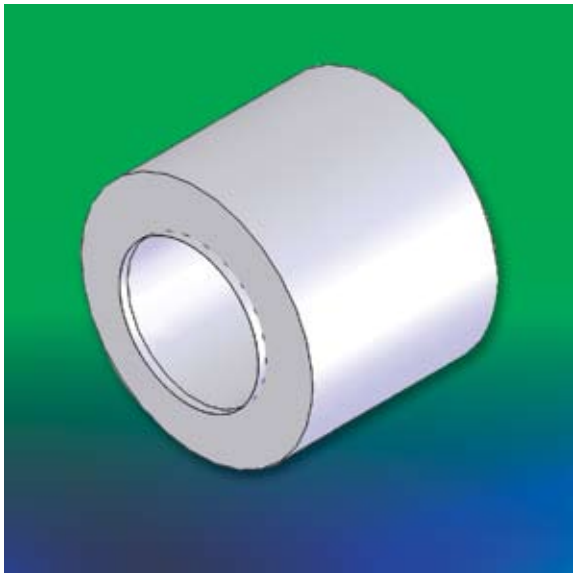
ID (mm)	Face Velocity (m/s)				
	5	10	15	20	25
	Dynamic Pressure Drop (Pa)				
150	0	3	5	8	13
300	0	3	3	5	10
450	0	0	3	5	8
600	0	0	3	5	8
900	0	0	3	3	5
1200	0	0	3	3	5

■ SLR-C Order Code

Model	Inlet Diameter, ID (mm)	Length, L (mm)
SLR-C	ID300	L1050

Example: SLR-C – ID300XL1050mm

SLR-CH Round Silencer



Description

ASLI Round Silencer (SLR-CH) is designed to attenuate noise in circular ducting.
The acoustical material, fiberglass reduces the noise transmitted through the ductwork.
Perforated metal sheet protects the fiberglass from being eroded by air flow.

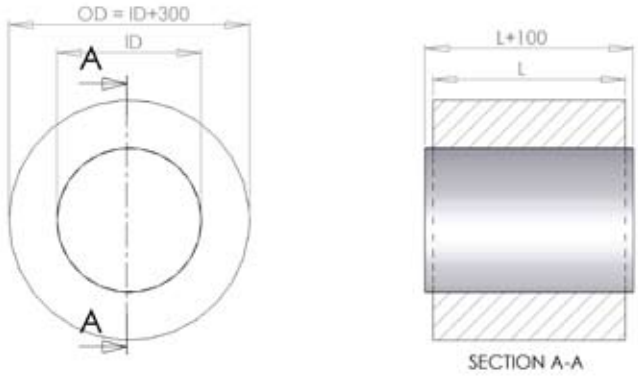
Material

- Casing: 1.0mm galvanized steel.
- Baffle: 0.7mm perforated galvanized steel.
- Acoustical material: Fiberglass.

Surface Finish

- Mill Galvanized.

SLR-CH Physical Dimension Unit:mm



Insertion Loss

ID (mm)	OD (mm)	Length, L (mm)	Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
			Face Velocity (m/s)	Insertion Loss (dB)							
150	450	300	-25	9	11	16	21	17	14	3	2
			0	9	8	17	20	17	16	6	3
			25	6	7	16	19	16	15	6	3
300	600	600	-25	7	9	15	17	20	11	3	2
			0	7	8	14	16	20	12	6	4
			25	6	7	13	15	19	12	6	3
450	750	900	-25	7	12	19	20	18	11	4	4
			0	7	11	19	19	18	13	8	4
			25	6	9	17	17	18	13	6	4
600	900	1200	-25	15	12	19	24	17	12	4	4
			0	13	11	19	23	16	13	8	5
			25	13	11	16	20	16	13	7	4
900	1200	1800	-25	17	19	23	28	9	8	3	3
			0	15	17	24	26	9	9	7	4
			25	15	17	20	23	9	9	6	4
1200	1500	2400	-25	17	20	23	23	7	6	2	2
			0	15	18	23	22	7	7	4	3
			25	15	18	19	19	7	7	4	2

- Positive face velocity indicates forward flow while negative face velocity indicates reverse flow.
- Forward flow occurs when the air flow is in the same direction as the noise transmitted.
- Reverse flow occurs when the air flow is opposite the noise transmitted direction.
- Zero face velocity indicates static insertion loss; the rest are dynamic insertion losses.

SLR-CH Round Silencer

Airflow Generated Sound Power

SLR-CH does not have internal components that would cause generated noise. The results of laboratory testing indicate indiscernible differences between the noise generated by the silencer and the noise generated by the connecting duct.

Pressure Drop

ID (mm)	Face Velocity (m/s)				
	5	10	15	20	25
	Dynamic Pressure Drop (Pa)				
150	0	3	5	10	16
300	0	3	3	5	10
450	0	0	3	5	8
600	0	0	3	3	5
900	0	0	3	3	5
1200	0	0	3	3	5

SLR-CH Order Code

Model	Inlet Diameter, ID (mm)	Length, L (mm)
SLR-CH	ID300	L900

Example: SLR-CH – ID300XL900mm