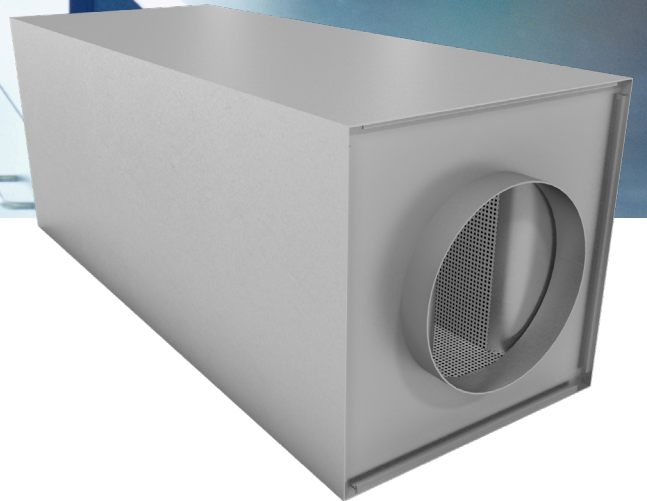


PCL/PCM/PCH

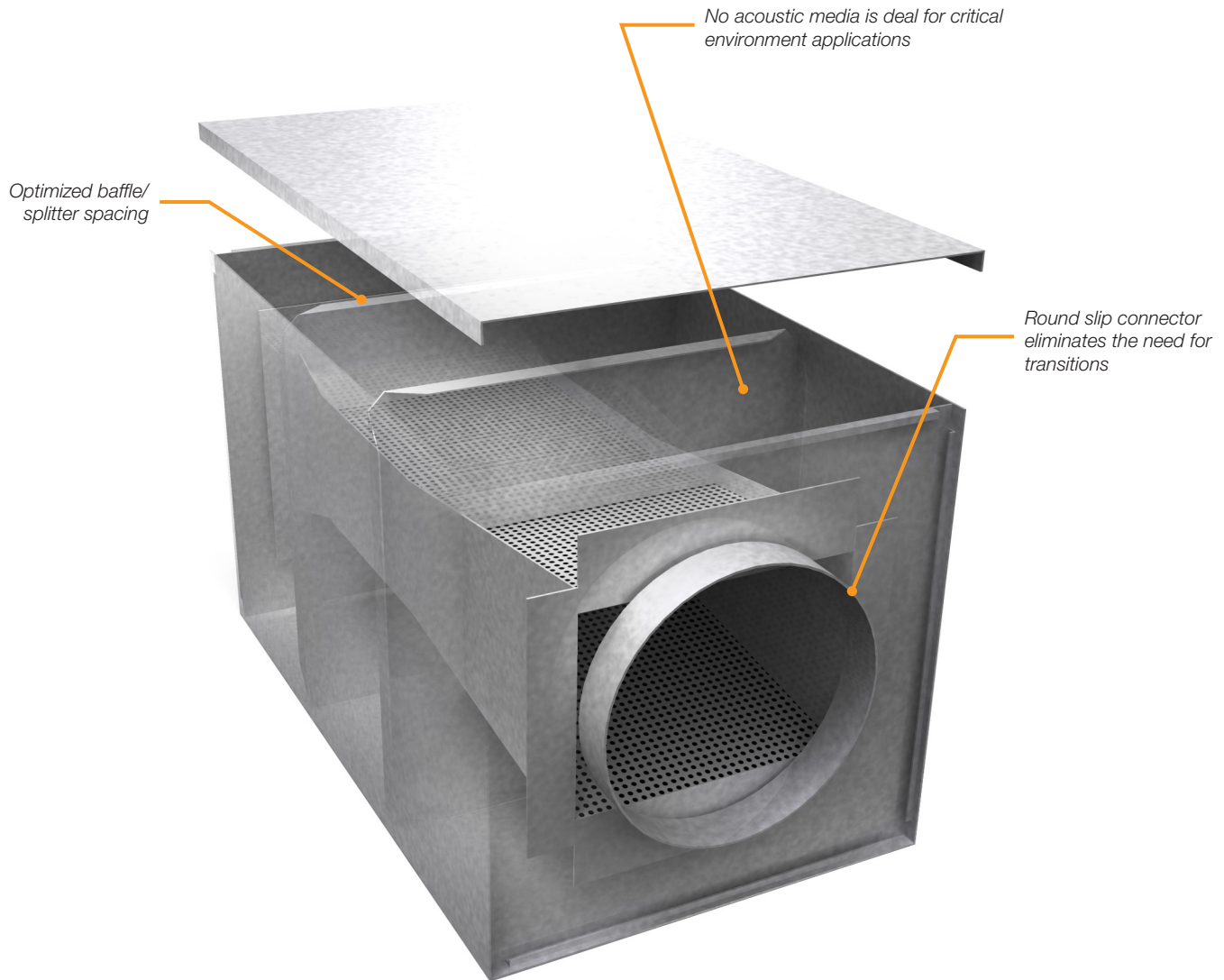
CIRCULAR SILENCER PACKLESS



PCL/PCM/PCH

Circular Silencer Packless

Designed to provide solutions for noise control applications where fibrous acoustic material is not permitted in the air stream, packless circular silencers feature optimally tuned resonator chambers to provide high levels of insertion loss.



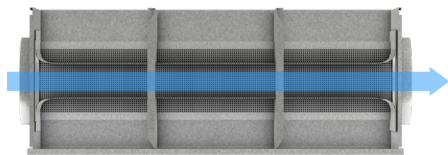
OPTIMIZED SOUND PERFORMANCE

+ Packless circular silencers are available with three internal baffle arrangements to best suit the application and the required performance.

- **Maximum Insertion Loss**

Geometry: L

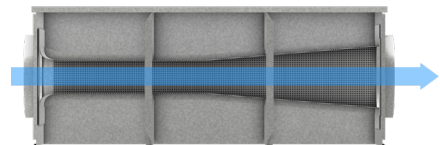
Best suited for applications with low air volumes, the engineered internal geometry provides high levels of insertion loss.



- **Balanced Performance**

Geometry: M

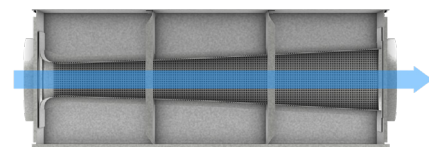
This configuration provides high levels of insertion loss across the full range of frequencies, and allows for static regain to minimize pressure drop.



- **Ultra-Low Pressure Drop**

Geometry: H

Best suited for applications where low pressure drop is the priority. This design minimizes pressure drop at higher velocities while still providing high levels of insertion loss.



TYPICAL APPLICATIONS

Packless circular silencers are an ideal solution for undesirable noise in applications with round duct, where fibrous acoustic media is not permitted. Typical applications include wash-down and high-pollutant areas including food processing plants, laboratory fume hood systems, hospitals, clean rooms, and kitchen exhausts.

CONSTRUCTION OPTIONS

+ Geometry

- Maximum insertion loss (L)
- Balanced performance (M)
- Ultra-low pressure drop (H)

+ Construction Type

- 22 gauge
- 18 gauge
- 16 gauge
- 10 gauge

+ Material

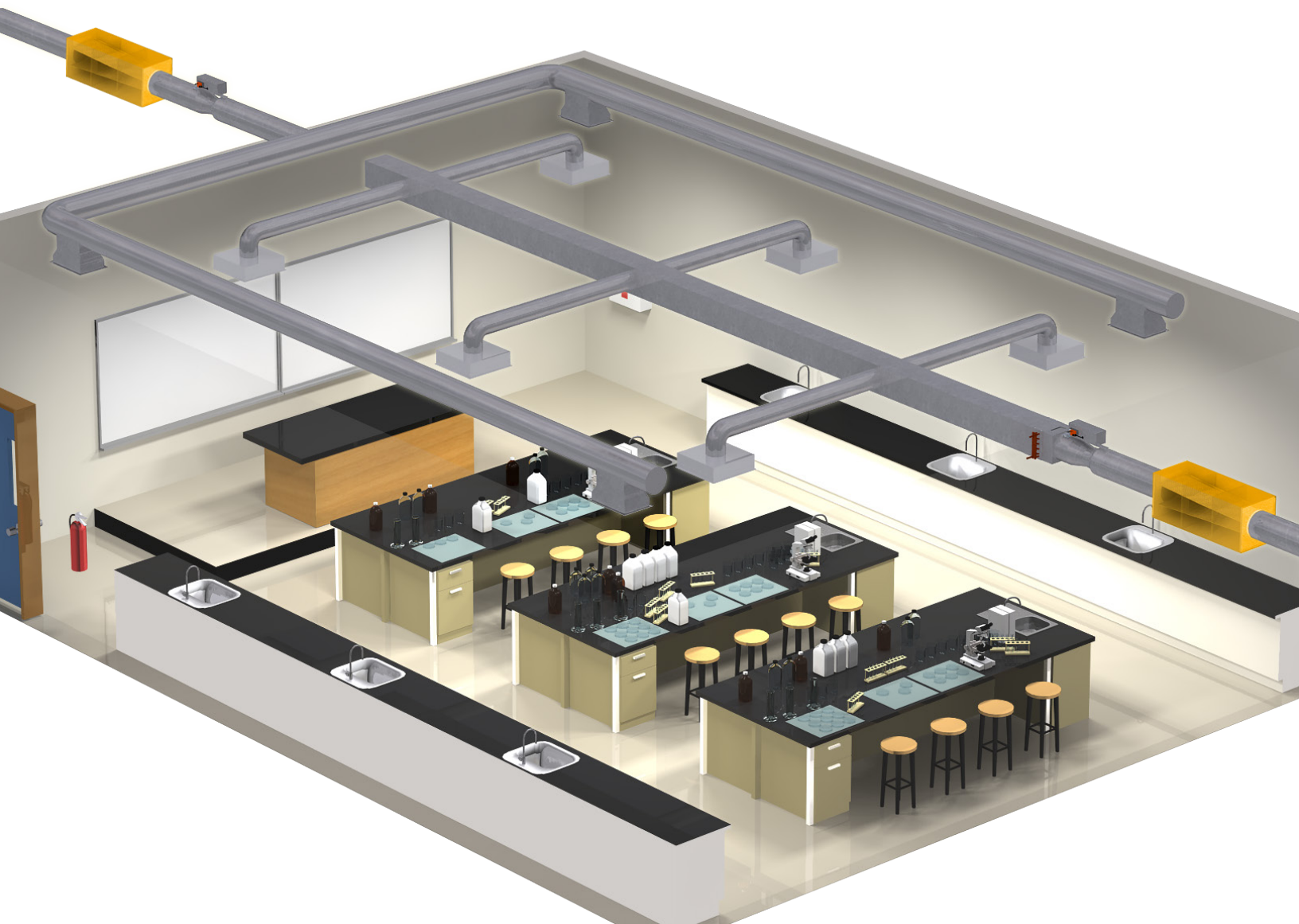
- Galvanized Steel
- Aluminum
- 304 Stainless Steel
- 316 Stainless Steel
- Galvanneal

+ Accessories

- Flanges
- Access doors
- Drainage plugs

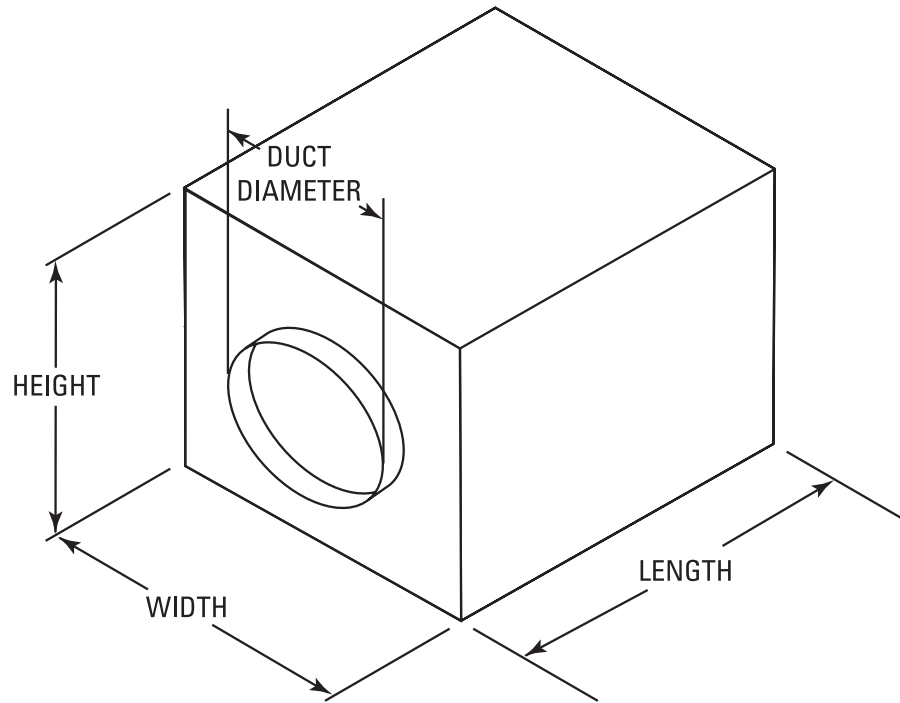
IDEAL FOR HEALTH CARE AND LABORATORIES

- + Packless silencers do not contain any acoustic media and consist only of a solid metal casing and a perforated metal liner.
- + The media free, optional stainless steel construction is safe for use in applications where corrosive gasses are present.
- + Lack of fibrous acoustic media eliminates the possibility of fibers entering the airstream and makes sanitation easy by eliminating absorptive material.



DIMENSIONAL DATA

Packless circular silencers are built to match the duct dimensions, therefore the width, height and length dimensions for the silencer must always be specified.



*Bank width & height typically equal the duct dimensions.

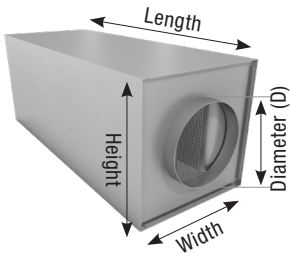
Dimension Limits

Casing Type	Width	Height	Duct Diameter		Length	
			Min	Max	Min	Max
S	20	20	6	16	36	72
B	30	30	6	16	36	72

1. All dimensions are in inches.
2. Standard sizes are based on raw material sizes and acceptable structural engineering practices.
3. For sizes outside the standard range, please contact your local sales rep.

PCL/PCM/PCH

Circular Silencer Packless



PERFORMANCE DATA

Geometry: L
Silencer Casing: S
Silencer Media: None

Dynamic Insertion Loss (DIL)

Diameter (in.)	Length (in.)	Weight (lbs)	Face Velocity (FPM)	Pressure Drop (in. w.g.)	Octave Band Dynamic Insertion Loss (dB)							
					63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	36	85	+500	0.12	18	12	21	28	17	17	14	12
			0	0	17	11	19	24	17	17	14	12
			-500	0.12	19	14	24	27	17	16	14	12
	60	137	+500	0.13	25	15	28	33	20	19	19	16
			0	0	22	15	22	29	19	20	19	16
			-500	0.13	26	18	29	34	21	21	19	15
12	36	87	+500	0.14	14	9	16	27	17	14	13	12
			0	0	11	8	13	25	18	14	13	12
			-500	0.14	16	11	18	28	21	15	13	12
	60	141	+500	0.17	16	11	19	28	22	18	19	18
			0	0	13	10	15	24	22	18	19	17
			-500	0.17	15	12	20	28	23	19	18	16
16	36	90	+500	0.12	8	7	12	30	14	12	12	10
			0	0	7	5	11	25	15	13	13	11
			-500	0.12	8	6	13	30	16	13	13	11
	60	145	+500	0.2	11	9	14	32	18	17	16	14
			0	0	9	8	11	27	18	16	16	13
			-500	0.2	12	10	14	31	20	16	16	12

Generated Noise(GN)

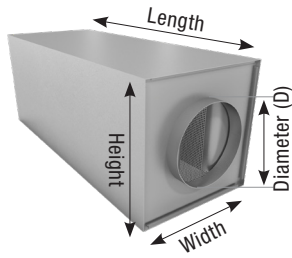
Diameter (in.)	Face Velocity (fpm)	Octave Band Generated Noise (dB)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	+500	58	39	29	28	30	27	22	25
	0	30	25	20	15	10	10	10	10
	-500	53	34	28	28	28	31	20	22
12	+500	63	48	37	33	37	35	31	32
	0	30	25	20	15	10	10	10	10
	-500	55	40	34	33	35	33	29	29
16	+500	64	48	39	35	39	37	33	32
	0	30	25	20	15	10	10	10	10
	-500	58	42	36	36	39	36	31	32

Performance Notes:

1. Data tables are derived from test data in conformance with ASTM E477-20.
2. "+" indicates performance data for forward flow (supply) applications.
3. "-" indicates performance data for reverse flow (return) applications.
4. Dynamic Insertion Loss is limited to 55 dB due to flanking.
5. For performance data specific to a configuration not cataloged, please use Price AIO Selection Software.
6. Standard casing dimensions are 20 in. wide x 20 in. high.

PCL/PCM/PCH

Circular Silencer Packless



PERFORMANCE DATA

Geometry: M
Silencer Casing: S
Silencer Media: None

Dynamic Insertion Loss (DIL)

Diameter (in.)	Length (in.)	Weight (lbs)	Face Velocity (FPM)	Pressure Drop (in. w.g.)	Octave Band Dynamic Insertion Loss (dB)							
					63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	36	85	+750	0.07	14	11	18	24	13	12	10	8
			0	0	16	10	17	22	12	12	11	9
			-750	0.07	18	12	20	24	13	13	11	9
	60	137	+750	0.09	18	15	26	30	17	16	15	12
			0	0	20	14	21	28	16	17	15	12
			-750	0.09	22	17	25	30	17	17	15	12
12	36	87	+750	0.07	12	8	15	27	14	9	8	7
			0	0	13	6	13	26	12	9	8	7
			-750	0.07	12	8	15	27	14	9	8	7
	60	141	+750	0.11	14	9	14	28	18	14	14	12
			0	0	11	7	11	24	18	14	14	12
			-750	0.11	13	9	15	28	19	14	14	12
16	36	90	+750	0.06	9	4	8	27	11	9	9	7
			0	0	7	3	7	24	12	9	8	6
			-750	0.06	8	4	8	26	14	9	9	6
	60	145	+750	0.08	12	6	10	27	14	12	12	9
			0	0	12	6	8	25	16	12	12	9
			-750	0.08	12	7	10	27	17	12	12	9

Generated Noise (GN)

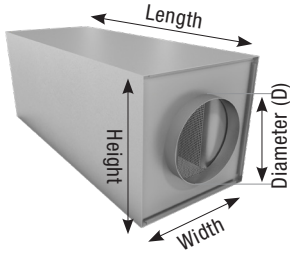
Diameter (in.)	Face Velocity (fpm)	Octave Band Generated Noise (dB)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	+750	55	39	30	28	30	26	21	22
	0	30	25	20	15	10	10	10	10
	-750	53	35	32	32	32	33	21	21
12	+750	58	44	34	32	35	32	27	26
	0	30	25	20	15	10	10	10	10
	-750	54	40	36	35	36	33	28	26
16	+750	58	45	36	34	37	35	30	27
	0	30	25	20	15	10	10	10	10
	-750	56	43	38	39	40	37	30	28

Performance Notes:

1. Data tables are derived from test data in conformance with ASTM E477-20.
2. "+" indicates performance data for forward flow (supply) applications.
3. "-" indicates performance data for reverse flow (return) applications.
4. Dynamic Insertion Loss is limited to 55 dB due to flanking.
5. For performance data specific to a configuration not cataloged, please use Price AIO Selection Software.
6. Standard casing dimensions are 20 in. wide x 20 in. high.

PCL/PCM/PCH

Circular Silencer Packless



PERFORMANCE DATA

Geometry: H
Silencer Casing: S
Silencer Media: None

Dynamic Insertion Loss (DIL)

Diameter (in.)	Length (in.)	Weight (lbs)	Face Velocity (FPM)	Pressure Drop (in. w.g.)	Octave Band Dynamic Insertion Loss (dB)							
					63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	36	54	+1000	0.05	11	9	16	23	11	12	10	8
			0	0	11	9	14	22	11	12	10	8
			-1000	0.05	14	10	17	23	12	13	10	8
	60	87	+1000	0.06	19	14	21	26	14	15	14	13
			0	0	19	13	17	24	13	15	15	12
			-1000	0.06	22	15	21	27	14	16	14	11
12	36	56	+1000	0.04	10	6	10	26	11	9	8	7
			0	0	11	5	8	23	11	8	8	7
			-1000	0.04	12	6	11	25	12	9	8	7
	60	91	+1000	0.06	17	8	13	27	14	13	12	10
			0	0	17	6	11	25	14	12	11	10
			-1000	0.06	18	8	13	26	15	12	11	10
16	36	59	+1000	0.04	7	3	5	18	10	7	7	5
			0	0	7	2	4	18	10	7	7	6
			-1000	0.04	7	3	5	19	11	8	8	6
	60	95	+1000	0.04	13	5	7	23	13	9	9	6
			0	0	11	4	5	24	14	9	10	7
			-1000	0.04	13	5	7	25	15	10	10	7

Generated Noise (GN)

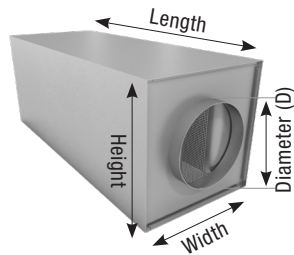
Diameter (in.)	Face Velocity (fpm)	Octave Band Generated Noise (dB)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	+1000	52	38	30	28	30	25	20	20
	0	30	25	20	15	10	10	10	10
	-1000	53	36	34	35	35	35	21	21
12	+1000	54	41	32	31	34	30	24	22
	0	30	25	20	15	10	10	10	10
	-1000	53	40	37	37	37	33	26	23
16	+1000	54	43	34	33	36	33	27	23
	0	30	25	20	15	10	10	10	10
	-1000	54	44	40	42	41	37	29	25

Performance Notes:

1. Data tables are derived from test data in conformance with ASTM E477-20.
2. "+" indicates performance data for forward flow (supply) applications.
3. "-" indicates performance data for reverse flow (return) applications.
4. Dynamic Insertion Loss is limited to 55 dB due to flanking.
5. For performance data specific to a configuration not cataloged, please use Price AIO Selection Software.
6. Standard casing dimensions are 20 in. wide x 20 in. high.

PCL/PCM/PCH

Circular Silencer Packless



PERFORMANCE DATA

Geometry: L
Silencer Casing: B
Silencer Media: None

Dynamic Insertion Loss (DIL)

Diameter (in.)	Length (in.)	Weight (lbs)	Face Velocity (FPM)	Pressure Drop (in. w.g.)	Octave Band Dynamic Insertion Loss (dB)							
					63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	36	85	+500	0.12	18	17	34	16	17	17	14	11
			0	0	20	16	26	14	17	17	14	11
			-500	0.12	21	19	38	16	18	17	15	12
	60	137	+500	0.14	23	16	38	18	22	22	22	19
			0	0	27	17	29	16	22	23	22	18
			-500	0.14	26	20	42	18	23	23	22	17
12	36	87	+500	0.15	23	16	36	16	19	21	21	20
			0	0	24	15	31	15	20	21	21	19
			-500	0.15	27	18	40	17	21	21	20	18
	60	141	+500	0.2	23	20	42	19	19	22	25	22
			0	0	18	17	28	18	19	23	24	20
			-500	0.2	20	21	39	19	19	23	23	18
16	36	90	+500	0.12	13	14	27	14	17	14	13	10
			0	0	10	11	21	13	16	14	12	10
			-500	0.12	11	13	26	14	17	14	13	10
	60	145	+500	0.15	18	16	31	16	19	17	17	13
			0	0	18	14	28	15	18	17	17	12
			-500	0.15	21	17	33	15	18	17	16	12

Generated Noise(GN)

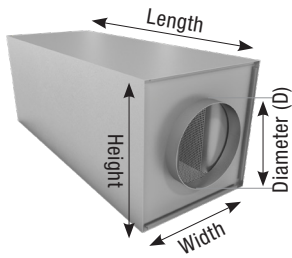
Diameter (in.)	Face Velocity (fpm)	Octave Band Generated Noise (dB)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	+500	59	41	30	29	29	26	23	27
	0	30	25	20	15	10	10	10	10
	-500	57	37	28	29	32	27	20	24
12	+500	60	43	32	32	34	32	27	29
	0	30	25	20	15	10	10	10	10
	-500	30	38	33	33	35	32	26	27
16	+500	63	49	35	36	38	36	32	33
	0	30	25	20	15	10	10	10	10
	-500	57	42	35	36	39	36	32	32

Performance Notes:

1. Data tables are derived from test data in conformance with ASTM E477-20.
2. "+" indicates performance data for forward flow (supply) applications.
3. "-" indicates performance data for reverse flow (return) applications.
4. Dynamic Insertion Loss is limited to 55 dB due to flanking.
5. For performance data specific to a configuration not cataloged, please use Price AIO Selection Software.
6. Extended casing dimensions are 30 in. wide x 30 in. high flanking.

PCL/PCM/PCH

Circular Silencer Packless



PERFORMANCE DATA

Geometry: M
Silencer Casing: B
Silencer Media: None

Dynamic Insertion Loss (DIL)

Diameter (in.)	Length (in.)	Weight (lbs)	Face Velocity (FPM)	Pressure Drop (in. w.g.)	Octave Band Dynamic Insertion Loss (dB)							
					63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	36	85	+750	0.08	20	13	37	12	13	12	11	9
			0	0	18	12	33	12	13	12	11	9
			-750	0.08	20	15	38	13	14	13	11	8
	60	137	+750	0.09	23	15	40	15	19	19	17	13
			0	0	21	15	27	14	19	18	17	14
			-750	0.09	23	19	40	15	20	18	18	14
12	36	87	+750	0.07	16	13	29	12	11	11	11	10
			0	0	15	11	25	11	12	11	11	10
			-750	0.07	16	13	29	12	11	11	11	10
	60	141	+750	0.09	23	12	32	13	14	15	16	14
			0	0	20	12	28	11	15	15	16	14
			-750	0.09	23	12	32	13	14	15	16	14
16	36	90	+750	0.06	8	10	22	11	10	10	9	6
			0	0	9	8	18	9	10	9	9	6
			-750	0.06	11	9	22	11	11	10	9	6
	60	145	+750	0.08	13	12	24	12	12	13	12	8
			0	0	14	11	21	11	12	13	12	8
			-750	0.08	17	13	25	12	12	13	12	8

Generated Noise(GN)

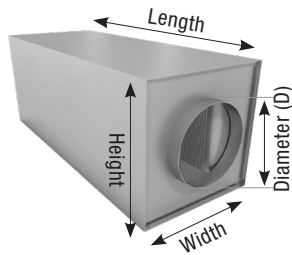
Diameter (in.)	Face Velocity (fpm)	Octave Band Generated Noise (dB)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	+750	55	40	30	29	29	25	21	23
	0	30	25	20	15	10	10	10	10
	-750	55	38	31	32	34	28	21	23
12	+750	57	43	34	33	35	32	28	28
	0	30	25	20	15	10	10	10	10
	-750	43	41	37	36	37	34	28	28
16	+750	58	45	34	35	37	34	28	27
	0	30	25	20	15	10	10	10	10
	-750	55	43	38	38	40	36	30	28

Performance Notes:

1. Data tables are derived from test data in conformance with ASTM E477-20.
2. "+" indicates performance data for forward flow (supply) applications.
3. "-" indicates performance data for reverse flow (return) applications.
4. Dynamic Insertion Loss is limited to 55 dB due to flanking.
5. For performance data specific to a configuration not cataloged, please use Price AIO Selection Software.
6. Extended casing dimensions are 30 in. wide x 30 in. high

PCL/PCM/PCH

Circular Silencer Packless



PERFORMANCE DATA

Geometry: H
Silencer Casing: B
Silencer Media: None

Dynamic Insertion Loss (DIL)

Diameter (in.)	Length (in.)	Weight (lbs)	Face Velocity (FPM)	Pressure Drop (in. w.g.)	Octave Band Dynamic Insertion Loss (dB)							
					63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	36	85	+1000	0.05	19	13	39	10	11	12	10	8
			0	0	18	10	35	9	11	11	10	8
			-1000	0.05	21	15	40	10	11	12	10	8
	60	137	+1000	0.06	24	11	48	12	14	15	15	13
			0	0	22	12	44	11	14	15	15	12
			-1000	0.06	24	16	46	13	15	16	15	12
12	36	87	+1000	0.04	13	11	25	9	9	9	8	7
			0	0	14	8	22	8	10	9	8	7
			-1000	0.04	16	11	26	9	10	10	8	7
	60	141	+1000	0.06	19	12	30	10	11	13	12	11
			0	0	18	10	27	10	12	13	12	11
			-1000	0.06	22	13	31	11	12	13	12	11
16	36	90	+1000	0.03	9	7	18	9	8	8	7	5
			0	0	7	6	16	8	8	8	8	6
			-1000	0.03	9	7	19	9	8	8	8	6
	60	145	+1000	0.04	12	10	22	11	10	11	10	7
			0	0	11	9	19	10	10	11	10	8
			-1000	0.04	12	11	22	11	10	11	10	8

Generated Noise(GN)

Diameter (in.)	Face Velocity (fpm)	Octave Band Generated Noise (dB)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	+1000	52	39	30	29	29	25	20	20
	0	30	25	20	15	10	10	10	10
	-1000	53	39	30	29	29	25	20	20
12	+1000	56	44	36	34	36	33	28	27
	0	30	25	20	15	10	10	10	10
	-1000	58	42	39	38	39	36	29	28
16	+1000	55	42	32	34	36	32	26	23
	0	30	25	20	15	10	10	10	10
	-1000	54	44	40	39	40	36	29	26

Performance Notes:

1. Data tables are derived from test data in conformance with ASTM E477-20.
2. "+" indicates performance data for forward flow (supply) applications.
3. "-" indicates performance data for reverse flow (return) applications.
4. Dynamic Insertion Loss is limited to 55 dB due to flanking.
5. For performance data specific to a configuration not cataloged, please use Price AIO Selection Software.
6. Extended casing dimensions are 30 in. wide x 30 in. high flanking.



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