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CIRCULAR ELBOW SILENCER PACKLESS



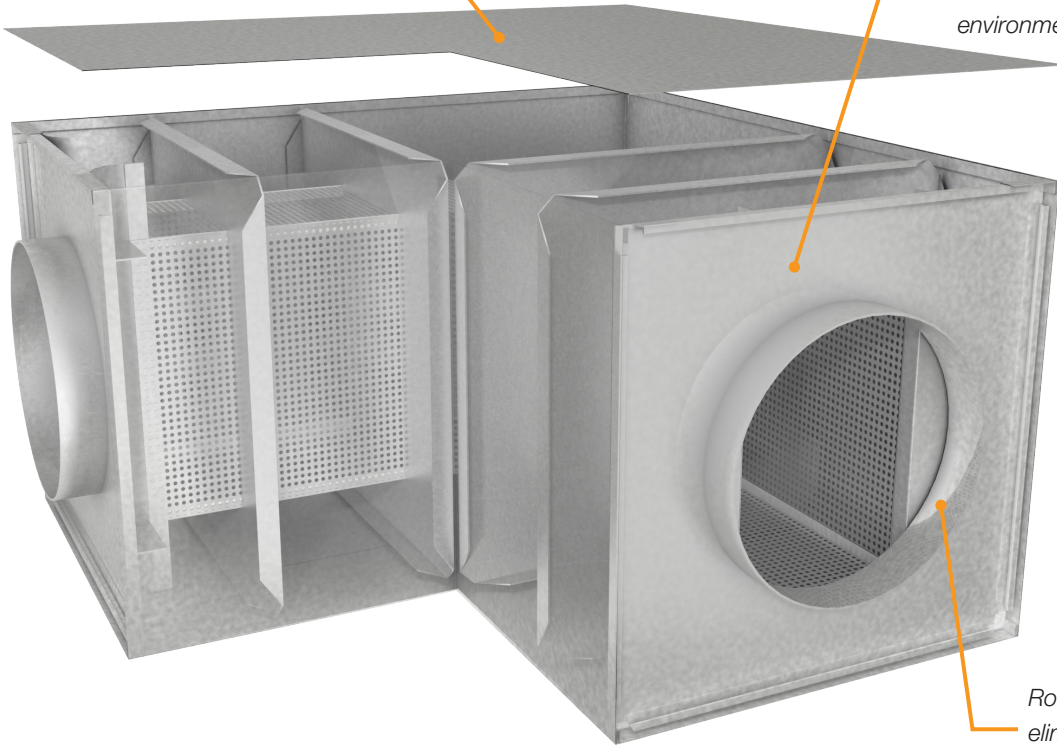
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Circular Elbow Silencer Packless

Packless circular elbow silencers provide a unique solution for noise control applications with round duct, where fibrous acoustic material is not permitted in the air stream, and where a 90° elbow is necessary due to space constraints.

90° elbow is suitable for applications with limited space

No acoustic media is ideal for critical environment applications



Round slip connector eliminates the need for transitions

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Circular Elbow Silencer Packless

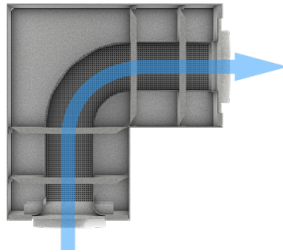
OPTIMIZED PERFORMANCE

- + The optimally tuned resonator chambers of packless circular silencers provide high levels of insertion loss across the targeted range of frequencies.
- + Packless circular silencers are available with three internal baffle arrangements to best suit the application and the required performance.

- **Maximum Insertion Loss**

- Geometry: L**

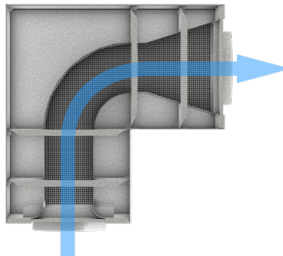
- Best suited for applications with low air volumes, the engineered internal geometry provides high levels of insertion loss.



- **Balanced Performance**

- Geometry: M**

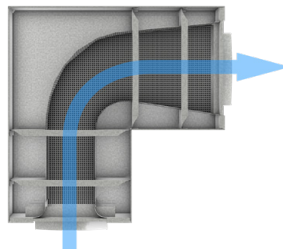
- This configuration provides high levels of insertion loss across the full range of frequencies, and allows for static regain to minimize pressure drop.



- **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 elbow silencers are an ideal solution for undesirable noise in applications with round duct where fibrous acoustic material is not permitted in the air stream, including computer rooms, hospitals, clean rooms, and laboratories. The elbow shape is ideal for applications with limited space where straight lengths of ductwork are not available.

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
 - Drainage plugs
 - Access doors

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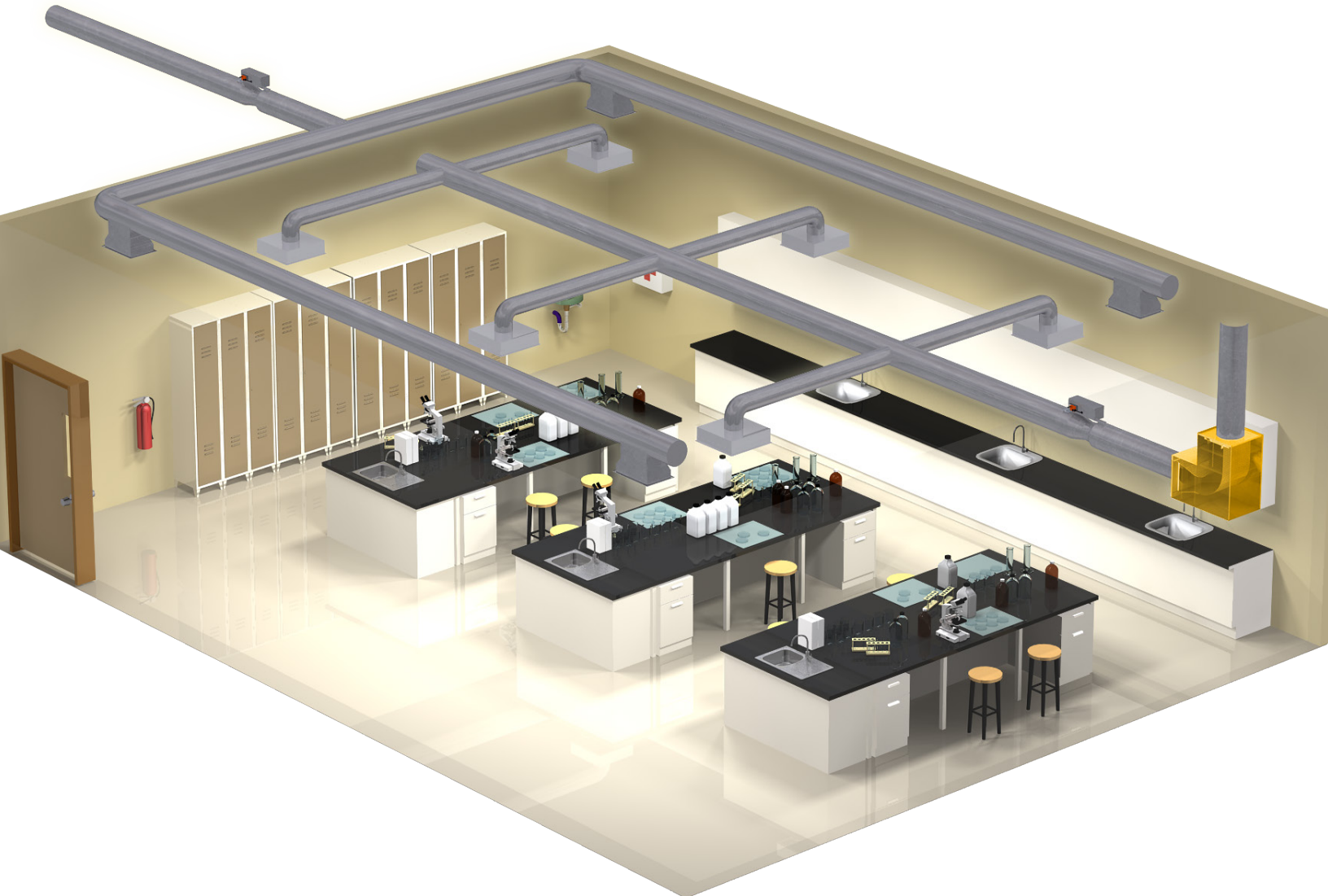
Circular Elbow Silencer Packless

IDEAL FOR CRITICAL ENVIRONMENTS

- + Packless silencers not contain any acoustic media and consists only of a solid metal casing and perforated metal liner.
- + The media free, all 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.

ELBOW SHAPE

- + The elbow shape of packless circular elbow silencers make them extremely versatile and an excellent choice for systems where straight lengths of ductwork are not available.
- + Elbow silencers perform at or above the level of circular silencers with a small increase in pressure drop on the system, and can be configured to suit most duct sizes without the use of transitions.

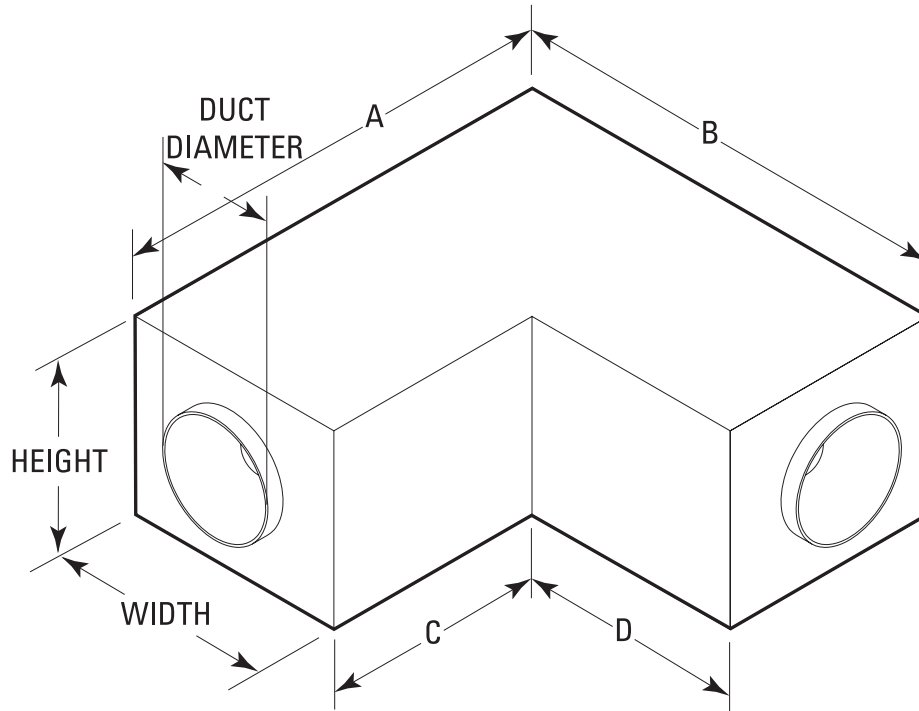


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Circular Elbow Silencer Packless

DIMENSIONAL DATA

Packless circular elbow 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.

Standard Dimension Limits

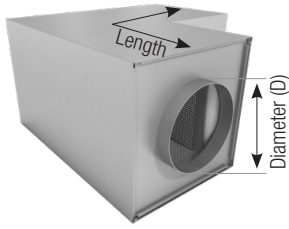
Model Type	Duct Diameter		Length		Width	Height
	Min	Max	Min	Max		
S	6	16	40	84	20	20
B	6	16	42	86	30	30

Leg A		Leg B		Leg C		Leg D	
Min	Max	Min	Max	Min	Max	Min	Max
28	58	28	58	8	28	8	28

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.

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Circular Elbow Silencer Packless



PERFORMANCE DATA

Geometry: L
Silencer Casing: Standard
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	40	52	+500	0.06	10	10	27	20	15	13	11	8
			0	0	9	10	26	18	15	13	11	7
			-500	0.06	10	13	25	18	15	13	11	8
	64	86	+500	0.06	18	13	26	24	19	18	15	13
			0	0	18	12	28	24	19	18	16	13
			-500	0.06	18	13	26	24	19	18	15	13
12	40	54	+500	0.06	10	6	21	29	16	12	10	6
			0	0	11	7	20	28	16	12	11	9
			-500	0.06	9	7	16	24	15	12	10	9
	64	92	+500	0.07	15	9	22	28	17	14	12	10
			0	0	14	8	22	28	17	14	13	11
			-500	0.07	14	9	19	27	17	14	12	10
16	40	58	+500	0.08	7	7	15	20	16	11	9	7
			0	0	6	5	13	18	14	10	9	7
			-500	0.08	6	8	13	20	14	10	8	7
	64	94	+500	0.07	10	7	17	26	19	13	12	10
			0	0	10	7	16	24	18	13	11	10
			-500	0.07	8	8	18	24	18	13	11	10

Generated Noise(GN)

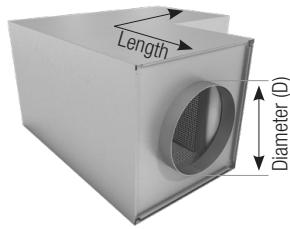
Diameter (in.)	Face Velocity (fpm)	Octave Band Generated Noise (dB)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	+500	67	49	41	36	38	34	24	26
	0	30	25	20	15	10	10	10	10
	-500	68	48	32	27	26	21	20	27
12	+500	69	49	40	37	39	39	34	30
	0	30	25	20	15	10	10	10	10
	-500	63	43	34	33	34	32	30	31
16	+500	63	44	38	40	46	44	37	29
	0	30	25	20	15	10	10	10	10
	-500	61	42	37	38	39	37	28	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" wide x 20" high.

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Circular Elbow Silencer Packless



PERFORMANCE DATA

Geometry: M
Silencer Casing: Standard
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	40	52	+750	0.04	9	11	27	20	14	13	11	8
			0	0	9	10	25	17	13	12	10	8
			-750	0.04	6	12	26	18	14	13	10	8
	64	86	+750	0.04	16	12	27	25	18	17	14	12
			0	0	16	10	26	23	17	16	14	12
			-750	0.04	16	12	26	24	18	16	13	12
12	40	54	+750	0.07	10	4	19	31	16	13	9	7
			0	0	10	7	16	28	14	11	7	5
			-750	0.07	8	7	17	19	15	11	9	5
	64	92	+750	0.06	14	7	19	28	16	13	10	8
			0	0	13	6	17	27	15	13	10	8
			-750	0.06	17	7	18	27	16	12	10	8
16	40	58	+750	0.08	6	13	27	14	10	9	7	5
			0	0	6	11	24	13	10	8	7	5
			-750	0.08	9	14	28	14	10	8	7	5
	64	94	+750	0.07	12	14	31	17	14	13	10	8
			0	0	12	12	28	15	13	11	10	8
			-750	0.07	13	14	33	17	14	12	10	8

Generated Noise(GN)

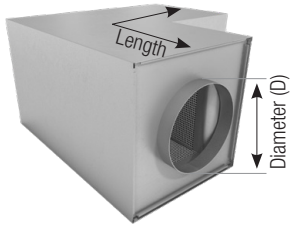
Diameter (in.)	Face Velocity (fpm)	Octave Band Generated Noise (dB)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	+750	68	51	43	38	38	34	27	27
	0	30	25	20	15	10	10	10	10
	-750	68	49	34	30	28	23	21	27
12	+750	68	50	43	39	40	39	35	31
	0	30	25	20	15	10	10	10	10
	-750	64	46	37	35	36	33	30	30
16	+750	64	48	42	41	45	43	37	31
	0	30	25	20	15	10	10	10	10
	-750	63	46	40	40	40	37	31	29

Performance Notes:

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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" wide x 20" high.

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Circular Elbow Silencer Packless



PERFORMANCE DATA

Geometry: H
Silencer Casing: Standard
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	40	52	+1000	0.04	8	12	25	20	13	13	9	8
			0	0	9	11	24	17	11	12	9	8
			-1000	0.04	5	11	25	18	13	12	9	7
	64	86	+1000	0.04	15	10	24	24	16	15	12	10
			0	0	14	9	24	23	14	15	12	10
			-1000	0.04	13	10	24	24	16	15	12	10
12	40	54	+1000	0.08	9	5	12	25	14	10	8	5
			0	0	8	3	9	21	11	8	7	5
			-1000	0.08	10	4	11	26	13	9	7	5
	64	92	+1000	0.08	13	6	14	25	14	10	8	6
			0	0	12	4	12	23	13	10	9	7
			-1000	0.08	12	5	14	25	14	11	9	7
16	40	58	+1000	0.08	6	4	10	15	12	8	6	4
			0	0	6	4	6	11	9	6	6	4
			-1000	0.08	6	4	9	14	10	7	6	4
	64	94	+1000	0.08	7	5	12	20	15	10	8	6
			0	0	7	4	11	17	13	9	8	6
			-1000	0.08	8	4	12	19	14	9	8	6

Generated Noise(GN)

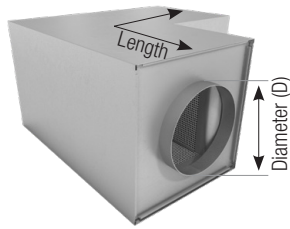
Diameter (in.)	Face Velocity (fpm)	Octave Band Generated Noise (dB)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	+1000	68	52	45	39	37	34	29	28
	0	30	25	20	15	10	10	10	10
	-1000	68	49	36	32	30	25	23	27
12	+1000	67	51	45	40	40	38	35	32
	0	30	25	20	15	10	10	10	10
	-1000	64	47	39	36	37	33	31	30
16	+1000	65	51	45	42	44	42	38	33
	0	30	25	20	15	10	10	10	10
	-1000	64	50	42	41	40	38	33	31

Performance Notes:

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6. Standard casing dimensions are 20 in. wide x 20 in. high

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Circular Elbow Silencer Packless



PERFORMANCE DATA

Geometry: L
Silencer Casing: Extended
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	42	83	+500	0.08	17	18	36	20	20	16	12	11
			0	0	16	15	31	19	20	15	12	11
			-500	0.08	10	18	36	20	19	15	12	10
	66	135	+500	0.06	23	21	43	28	22	19	16	13
			0	0	22	19	43	27	21	18	16	13
			-500	0.06	21	20	42	27	21	19	15	13
12	42	87	+500	0.07	13	15	39	19	16	12	10	6
			0	0	13	15	39	19	15	12	11	9
			-500	0.07	11	15	36	20	15	13	10	8
	66	139	+500	0.07	22	17	40	22	18	16	13	10
			0	0	21	17	40	22	18	16	13	11
			-500	0.07	20	17	38	23	18	15	12	10
16	42	88	+500	0.08	6	14	28	14	11	11	9	7
			0	0	6	12	24	13	10	10	9	7
			-500	0.08	10	15	31	15	11	10	8	7
	66	144	+500	0.08	13	16	34	17	16	14	12	10
			0	0	12	14	30	16	15	13	12	10
			-500	0.08	14	16	35	18	15	14	12	9

Generated Noise(GN)

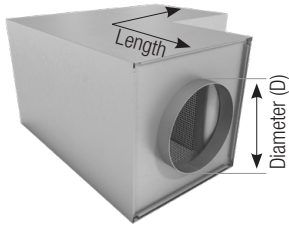
Diameter (in.)	Face Velocity (fpm)	Octave Band Generated Noise (dB)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	+500	67	48	41	36	40	36	25	26
	0	30	25	20	15	10	10	10	10
	-500	68	46	32	26	26	20	20	27
12	+500	65	49	41	37	38	38	35	34
	0	30	25	20	15	10	10	10	10
	-500	62	42	34	33	35	32	30	32
16	+500	63	47	42	41	45	45	37	29
	0	30	25	20	15	10	10	10	10
	-500	62	41	36	37	39	37	28	26

Performance Notes:

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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.

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Circular Elbow Silencer Packless



PERFORMANCE DATA

Geometry: M
Silencer Casing: Extended
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	42	83	+750	0.06	12	16	33	20	18	14	11	10
			0	0	11	14	30	18	16	13	10	9
			-750	0.06	8	18	37	19	17	14	10	9
	66	135	+750	0.05	21	20	41	26	20	18	14	12
			0	0	21	17	41	24	19	17	14	12
			-750	0.05	21	19	43	25	19	17	14	12
12	42	87	+750	0.07	11	17	37	19	12	11	9	7
			0	0	9	13	36	15	13	11	9	7
			-750	0.07	9	19	38	18	14	11	9	8
	66	139	+750	0.07	19	16	38	21	16	14	12	10
			0	0	19	15	36	19	16	14	12	9
			-750	0.07	20	17	38	21	17	14	11	9
16	42	88	+750	0.08	6	13	27	14	10	9	7	5
			0	0	6	11	24	13	10	8	7	5
			-750	0.08	9	14	28	14	10	8	7	5
	66	144	+750	0.07	12	14	31	17	14	13	10	8
			0	0	12	12	28	15	13	11	10	8
			-750	0.07	13	14	33	17	14	12	10	8

Generated Noise(GN)

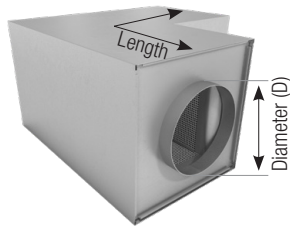
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		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
8	+750	68	51	44	38	38	35	27	27
	0	30	25	20	15	10	10	10	10
	-750	68	48	34	29	29	23	21	27
12	+750	66	50	43	39	39	38	35	33
	0	30	25	20	15	10	10	10	10
	-750	63	45	37	35	36	33	30	31
16	+750	64	50	44	41	44	43	37	31
	0	30	25	20	15	10	10	10	10
	-750	63	46	39	39	40	37	31	29

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6. Extended casing dimensions are 30 in. wide x 30 in. high.

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Circular Elbow Silencer Packless



PERFORMANCE DATA

Geometry: H
Silencer Casing: Extended
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	42	83	+1000	0.03	7	12	27	19	14	12	9	8
			0	0	6	13	29	16	13	11	8	7
			-1000	0.03	6	14	36	18	13	12	8	7
	66	135	+1000	0.03	19	17	39	23	17	16	12	11
			0	0	19	16	39	21	17	15	12	11
			-1000	0.03	20	18	42	23	17	16	12	10
12	42	87	+1000	0.09	8	11	30	15	12	10	7	5
			0	0	9	10	27	15	12	10	8	5
			-1000	0.09	8	13	34	15	12	9	8	5
	66	139	+1000	0.08	17	12	33	19	15	13	10	8
			0	0	18	12	30	18	15	13	10	7
			-1000	0.08	18	13	35	18	15	13	10	7
16	42	88	+1000	0.08	4	12	25	13	8	7	6	4
			0	0	6	10	25	14	9	6	6	4
			-1000	0.08	7	12	24	13	9	7	6	4
	66	144	+1000	0.08	10	12	28	16	12	10	8	6
			0	0	11	11	27	13	12	9	8	6
			-1000	0.08	12	12	29	15	12	10	8	6

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	69	53	45	39	37	35	29	28
	0	30	25	20	15	10	10	10	10
	-1000	68	49	36	32	30	25	23	27
12	+1000	67	52	45	39	39	38	35	32
	0	30	25	20	15	10	10	10	10
	-1000	64	47	39	36	36	33	30	30
16	+1000	65	52	45	41	43	42	37	33
	0	30	25	20	15	10	10	10	10
	-1000	63	50	42	40	40	37	33	31

Performance Notes:

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6. Extended casing dimensions are 30 in. wide x 30 in. high.



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