



## Specification sheet

# Fire Pump Drive Engine

## Exhaust Silencer

### Description

Cummins optional exhaust silencers by Nelson<sup>®</sup> equip your fire pump drive engine to reduce undesirable ambient noise levels.

Nelson Global Products mufflers have been around for more than 70 years and have the distinction of having the widest product range available in the marketplace. With their comprehensive technology, design, and manufacturing capabilities, Nelson Global Products meet Cummins Inc. fire pump drive engine installation and performance requirements.

### Features

- Aluminized Steel construction
- Silicone Aluminum paint
- Multiple sound reduction levels
- Multiple exhaust configurations
- ANSI flanges standard
- Low back pressure options

Based on their custom application and desire for ambient noise reduction, customers may equip their Cummins fire pump drive engine with:

- The Industrial “100”,
- The Residential “200”,
- The Critical “300”, or
- The Special Hospital Grade “400”.

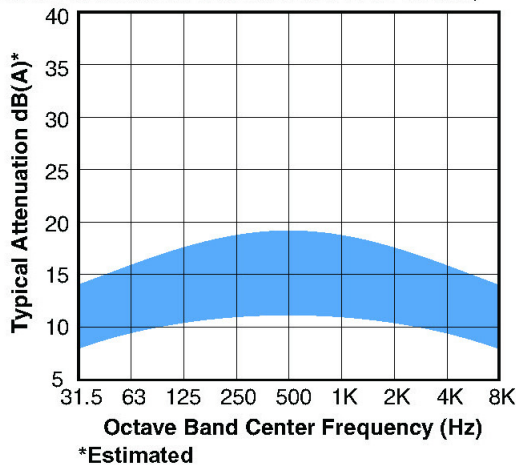
For more assistance with selecting your Nelson<sup>®</sup> exhaust silencer, please contact your Cummins sales representative.



# Industrial "100" Level Exhaust Silencers

## Typical Attenuation Curve dB(A)\*

(ACTUAL ATTENUATION MAY VARY ACCORDING TO APPLICATION)



### Application:

These silencers are recommended where minimum silencing is required and ambient noise levels are medium to high.

### Construction:

**Aluminized Steel:** Nelson Silencers through 26" O.D. are fabricated of aluminized steel as standard materials. This material has a maximum operating temperature of 1250°F.

**Mild Steel/Aluminized Steel:** Nelson Silencers 30" O.D. and larger are fabricated of mild steel and aluminized steel. All silencers 30" O.D. through 36" O.D. have aluminized steel bodies with all other components fabricated from mild steel. Silencers 42" O.D. and larger are fabricated from mild steel.

**Silicone Aluminum Paint:** Nelson Silencers through 26" O.D. are given a coat of high heat resistant silicone aluminum paint.

**Primer/Silicone Aluminum Paint:** Nelson Silencers 30" O.D. and larger are given a coat of high heat, rust inhibiting primer and then a topcoat of high heat resistant silicone aluminum paint. Physical properties are maintained up to 900°F\* on aluminized steel and 1100°F\* on mild steel.

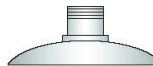
### Sample Specification:

The silencer is to be a Nelson Industrial "100" Level Silencer constructed of aluminized steel (26" body diameter and smaller) or mild steel/aluminized steel (larger than 26" body diameter) with all welded construction and suitable for mounting in any position.



### "F" Mounting Flange:

Standard in sizes 4" to 22". Drilling matches 125/150# ASA standard.

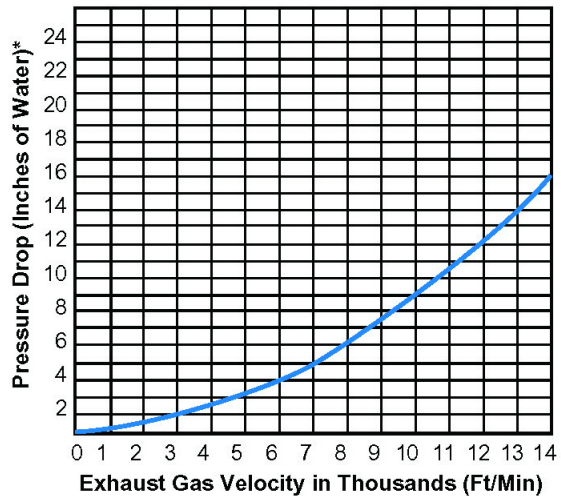


### "P" Male Pipe Threads:

NPT ends offered in sizes 3/4" through 4".

Companion flanges available for 4" to 22".

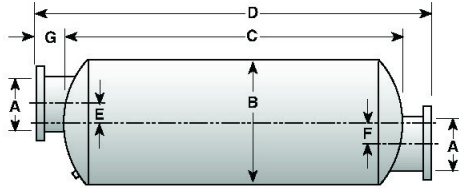
## Pressure Drop



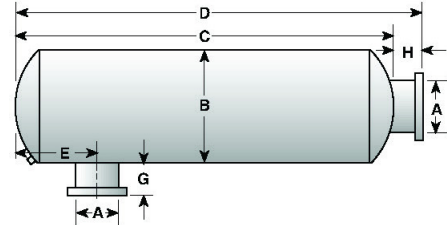
**Note:** When figuring pressure drop for side inlet add 3" H<sub>2</sub>O to back pressure shown on above curve.

\*Estimated

Type 1



Type 3



Part Number	A Nominal Inlet Diameter	B Body Dia. O.D.	C Body Length	D Overall Length	E Offset To C/L	F Offset To C/L	G Inlet Length
41120	2.0	7.6	22.8	26.6	0	0	1.9
41125	2.5	8.1	27.2	32.6	0	0	2.7
41130	3.0	8.5	31.1	36.6	0	0	2.7
41135	3.5	9.0	32.8	37.6	0	0	2.4
41140*	4.0	10.1	32.2	38.0	2.3	2.3	2.9
41150*	5.0	12.1	32.3	37.9	2.8	2.8	2.8
41160*	6.0	14.1	32.9	38.4	3.4	3.4	2.8
41180	8.0	18.1	48.8	58.0	0	0	4.6
41182	10.0	22.1	50.6	58.0	0	0	3.7
41184	12.0	22.2	65.6	73.0	0	0	3.7
41186	14.0	36.2	70.6	76.0	0	0	2.7
41188	16.0	42.2	84.2	90.8	0	0	3.3
41199	18.0	42.2	96.2	103.0	0	0	3.4
41121	20.0	48.3	98.4	104.0	0	0	2.8
41122	22.0	54.3	99.6	107.3	0	0	3.9

Part Number	A Nominal Inlet Diameter	B Body Dia. O.D.	C Body Length	D Overall Length	E Offset To C/L	G Inlet Length	H Outlet Length
43120	2.0	7.6	22.4	24.5	3.2	2.0	2.1
43125	2.5	8.1	27.7	30.2	3.9	2.5	2.4
43130	3.0	8.5	30.6	33.6	3.8	3.0	2.3
43135	3.5	9.0	32.8	35.4	4.9	3.0	2.6
43140	4.0	9.0	32.8	35.4	5.4	3.0	2.6
43150	5.0	12.1	30.4	34.2	5.7	4.0	3.8
43160	6.0	14.1	30.6	34.5	6.8	4.0	3.9
43180	8.0	18.1	48.4	53.2	9.2	4.0	4.8
43182	10.0	22.2	50.6	54.3	12.3	4.0	3.7
43184	12.0	22.2	65.6	69.3	14.3	4.0	3.7
43186	14.0	36.2	70.6	73.8	15.3	4.0	3.2
43188	16.0	42.2	84.2	87.5	18.1	4.0	3.3
43199	18.0	42.3	96.2	99.6	19.0	4.0	3.3
43121	20.0	48.3	97.9	101.2	20.0	4.0	3.3
43122	22.0	54.3	99.6	103.5	21.8	4.0	3.9

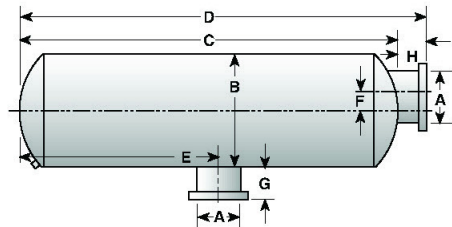
\* Inlet and outlet offset from centerline of silencer as shown in dimension E and F.

Drains are standard on all silencers with a 9" body diameter or larger.

**Note:** Specifications are subject to change without notice.

**Note:** All dimensions are in inches.

Type 4



Part Number	A Nominal Inlet Diameter	B Body Diameter O.D.	C Body Length	D Overall Length	E Offset To C/L	F Offset To C/L	G Inlet Length	H Outlet Length
44540	4.0	9.0	32.8	35.4	16.4	0	3.0	2.6
44550	5.0	12.1	30.3	34.2	15.2	0	4.0	3.8
44560	6.0	14.1	30.6	34.5	15.3	0	4.0	3.9
44580	8.0	18.1	48.6	53.3	24.5	0	4.0	4.7
44582	10.0	22.2	50.6	54.3	25.3	0	4.0	3.7
44584	12.0	26.2	49.8	53.4	24.9	6.5	4.0	3.6
44586	14.0	36.2	70.6	73.8	35.3	0	4.0	3.2



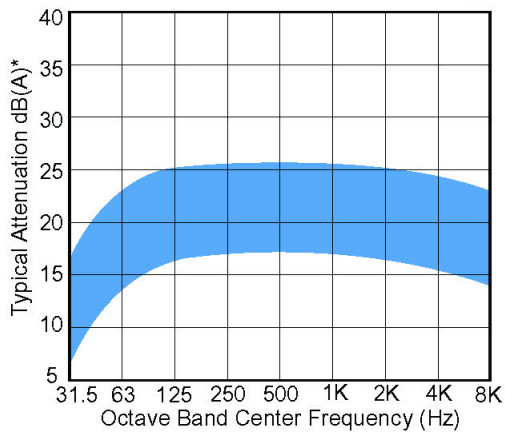
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Form LT33501 5/01



# Residential "200" Level Exhaust Silencers

## Typical Attenuation Curve dB(A)\*

(ACTUAL ATTENUATION MAY VARY ACCORDING TO APPLICATION)



\*Estimated

### Application:

These silencers are recommended where minimum silencing is required and ambient noise levels are medium to high.

### Construction:

**Aluminized Steel:** Nelson Silencers through 26" O.D. are fabricated of aluminized steel as standard materials. This material has a maximum operating temperature of 1250°F.

**Mild Steel/Aluminized Steel:** Nelson Silencers 30" O.D. and larger are fabricated of mild steel and aluminized steel. All silencers 30" O.D. through 36" O.D. have aluminized steel bodies with all other components fabricated from mild steel. Silencers 42" O.D. and larger are fabricated from mild steel.

**Silicone Aluminum Paint:** Nelson Silencers through 26" O.D. are given a coat of high heat resistant silicone aluminum paint.

**Primer/Silicone Aluminum Paint:** Nelson Silencers over 30" O.D. and larger are given a coat of high heat, rust inhibiting primer and then a topcoat of high heat resistant silicone aluminum paint. Physical properties are maintained up to 900°F\* on aluminized steel and 1100°F\* on mild steel.

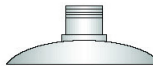
### Sample Specification:

The silencer is to be a Nelson Residential "200" Level Silencer constructed of aluminized steel (26" body diameter and smaller) or mild steel/aluminized steel (larger than 26" body diameter) with all welded construction and suitable for mounting in any position.



### "F" Mounting Flange:

Standard in sizes 4" to 22". Drilling matches 125/150# ASA standard.

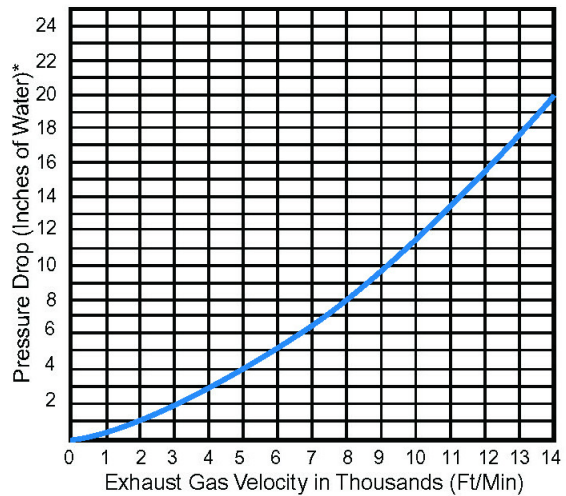


### "P" Male Pipe Threads:

NPT ends offered in sizes 3/4" through 4".

Companion flanges available for 4" to 22".

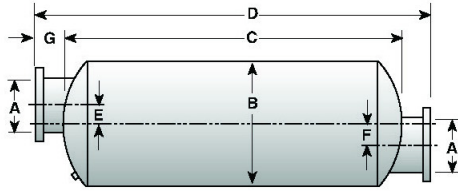
## Pressure Drop



**Note:** When figuring pressure drop for side inlet or middle side inlet add 3" H<sub>2</sub>O to back pressure shown on above curve.

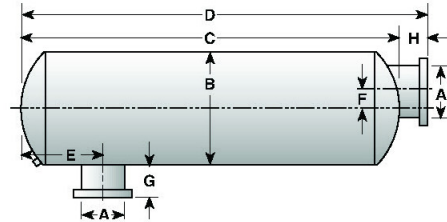
\*Estimated

**Type 1**



Part Number	A Nominal Inlet Diameter	B Body Dia. O.D.	C Body Length	D Overall Length	E Offset To C/L	F Offset To C/L	G Inlet Length
41220*	2.0	8.1	31.7	35.6	1.25	1.25	1.9
41225*	2.5	9.0	38.8	42.8	1.50	1.50	2.0
41230*	3.0	10.1	38.2	44.0	2.75	2.75	2.9
41235*	3.5	10.1	44.2	50.0	2.06	2.06	2.9
41240*	4.0	10.1	49.2	55.0	2.31	2.31	2.9
41250*	5.0	14.1	43.5	51.4	3.61	3.61	4.0
41260*	6.0	14.1	57.5	65.4	3.60	3.60	4.0
41280	8.0	22.2	56.6	64.0	0	0	3.7
41282	10.0	22.2	84.7	92.0	0	0	3.7
41284	12.0	26.2	79.7	87.0	0	0	3.7
41286	14.0	36.2	94.6	101.0	0	0	3.2
41288	16.0	42.3	108.2	115.0	0	0	3.4
41299	18.0	42.3	108.2	114.9	0	0	3.3
41221	20.0	48.3	134.1	140.1	0	0	3.0
41222	22.0	54.3	135.5	143.2	0	0	3.9

**Type 3**



Part Number	A Nominal Inlet Diameter	B Body Dia. O.D.	C Body Length	D Overall Length	E Offset To C/L	F Offset To C/L	G Inlet Length	H Outlet Length
43220	2.0	8.1	31.7	32.8	3.4	0	2.0	1.9
43225	2.5	9.0	38.8	40.8	4.4	1.5	2.5	2.0
43230	3.0	10.1	38.2	41.1	4.1	1.8	3.0	2.9
43235	3.5	10.1	44.2	47.1	4.6	2.1	3.0	2.9
43240	4.0	10.1	49.2	51.0	5.1	0	3.0	2.9
43250	5.0	14.1	43.5	45.7	5.8	2.6	4.0	3.9
43260	6.0	14.1	57.6	61.5	6.8	3.1	4.0	3.9
43280	8.0	22.2	56.6	60.3	11.3	0	4.0	3.7
43282	10.0	22.2	84.7	88.3	11.3	0	4.0	3.6
43284	12.0	26.2	79.8	83.4	12.9	0	4.0	3.6
43286	14.0	36.2	94.7	97.9	15.3	0	4.0	3.2
43288	16.0	42.1	108.2	111.6	16.1	0	4.0	3.4
43299	18.0	42.2	108.2	111.5	19.1	0	4.0	3.3
43221	20.0	48.3	134.1	137.1	19.8	0	4.0	3.0
43222	22.0	54.3	135.6	139.4	21.8	0	4.0	3.8

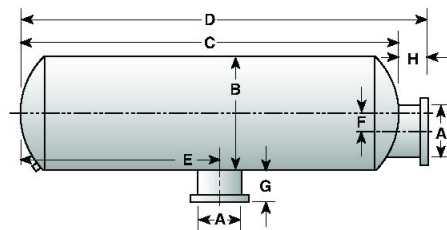
\*Inlet and outlet offset from centerline of silencer as shown in dimension E and F.

Drains are standard on all silencers with a 9" body diameter or larger.

**Note:** Specifications are subject to change without notice.

**Note:** All dimensions are in inches.

**Type 4**



Part Number	A Nominal Inlet Diameter	B Body Diameter O.D.	C Body Length	D Overall Length	E Offset To C/L	F Offset To C/L	G Inlet Length	H Outlet Length
44640	4.0	10.1	49.2	52.1	24.6	0	3.0	2.9
44650	5.0	14.1	43.6	47.5	21.8	2.6	4.0	3.9
44660	6.0	14.1	57.6	61.5	28.8	3.1	4.0	3.9
44680	8.0	22.1	54.6	58.3	26.3	0	4.0	3.7
44682	10.0	22.1	84.6	88.2	42.3	0	4.0	3.6
44684	12.0	26.1	79.5	83.4	39.9	0	4.0	3.6
44686	14.0	36.2	88.7	91.9	44.3	0	4.0	3.2

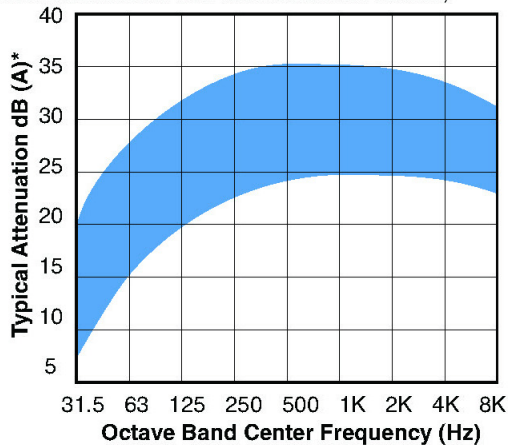


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LT33502 5/01

# Critical "300" Level Exhaust Silencers

## Typical Attenuation Curve dB(A)\*

(ACTUAL ATTENUATION MAY VARY ACCORDING TO APPLICATION)



\*Estimated

### Application:

These silencers are recommended where ambient noise is low and a high degree of silencing is necessary.

### Construction:

**Aluminized Steel:** Nelson Silencers through 26" O.D. are fabricated of aluminized steel as standard materials. This material has a maximum operating temperature of 1250°F.

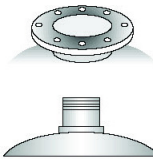
**Mild Steel/Aluminized Steel:** Nelson Silencers 30" O.D. and larger are fabricated of mild steel and aluminized steel. All silencers 30" O.D. and larger have aluminized steel bodies with all other components fabricated from mild steel.

**Silicone Aluminum Paint:** Nelson Silencers through 26" O.D. are given a coat of high heat resistant silicone aluminum paint.

**Primer/Silicone Aluminum Paint:** Nelson Silencers 30" O.D. and larger are given a coat of high heat, rust inhibiting primer and then a topcoat of high heat resistant silicone aluminum paint. Physical properties are maintained up to 900°F\* on aluminized steel and 1100°F\* on mild steel.

### Sample Specification:

The silencer is to be a Nelson Critical "300" Level Silencer constructed of aluminized steel (26" body diameter and smaller) or mild steel/aluminized steel (larger than 26" body diameter) with all welded construction and suitable for mounting in any position.



### "F" Mounting Flange:

Standard in sizes 4" to 22". Drilling matches 125/150# ASA standard.

### "P" Male Pipe Threads:

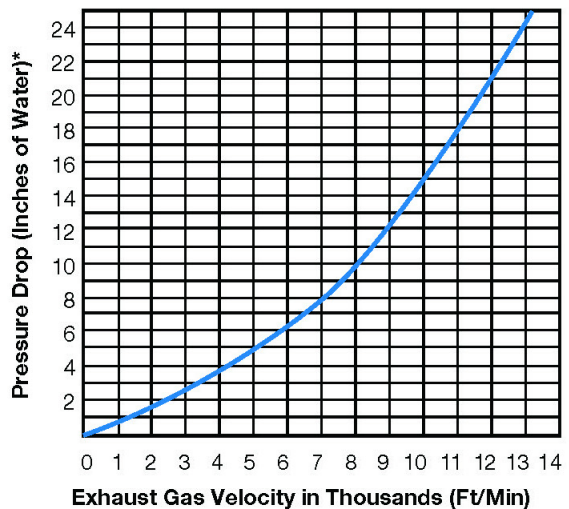
NPT ends offered in sizes 3/4" through 4".

Companion flanges available for 4" to 22".

### Construction Features:

Double wrapped body is standard on all "300" Level Critical Silencers.

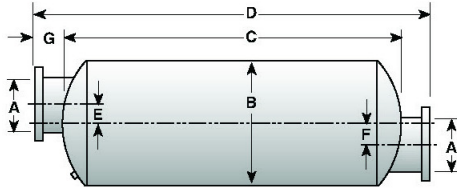
## Pressure Drop



**Note:** When figuring pressure drop for side inlet or middle side inlet add 3" H<sub>2</sub>O to back pressure shown on above curve.

\*Estimated

**Type 1**



Part Number	A Nominal Inlet Diameter	B Body Dia. O.D.	C Body Length	D Overall Length	E Offset To C/L	F Offset To C/L	G Inlet Length
41307	.75	4.2	21.3	23.8	0	0	1.3
41310*	1.00	5.0	23.4	27.0	0.75	0.72	1.8
41313	1.25	6.1	27.5	31.2	0	0	1.8
41315	1.50	8.1	30.7	34.6	0	0	1.9
41320	2.00	9.0	40.8	44.0	0	0	1.6
41325	2.50	10.1	47.2	52.0	0	0	2.4
41330	3.00	11.1	49.5	55.6	0	0	3.1
41335	3.50	12.1	51.3	57.0	0	0	2.3
41340*	4.00	12.1	58.3	64.0	1.82	1.80	2.9
41350*	5.00	14.1	63.5	71.4	2.60	2.56	4.0
41360*	6.00	16.1	72.0	80.8	2.00	2.00	4.4
41380	8.00	22.1	78.7	86.0	0	0	3.7
41382	10.00	26.2	79.7	87.0	0	0	3.7
41384	12.00	30.2	104.8	112.0	0	0	3.6
41386	14.00	42.2	108.2	115.0	0	0	3.4
41388	16.00	42.2	156.2	163.0	0	0	3.4
41399	18.00	48.2	133.9	139.9	0	0	3.1
41321	20.00	54.3	159.6	165.5	0	0	3.3
41322	22.00	60.3	161.3	166.8	0	0	2.8

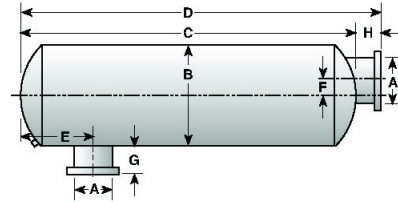
\*Inlet and outlet offset from centerline of silencer as shown in dimension E and F.

Drains are standard on all silencers with a 9" body diameter or larger.

**Note: Specifications are subject to change without notice.**

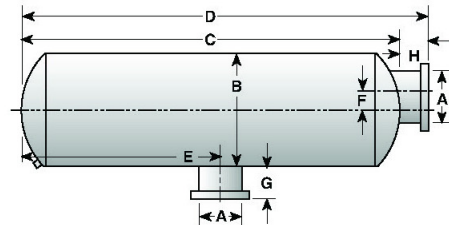
**Note: All dimensions are in inches.**

**Type 3**



Part Number	A Nominal Inlet Diameter	B Body Dia. O.D.	C Body Length	D Overall Length	E Offset To C/L	F Offset To C/L	G Inlet Length	H Outlet Length
43320	2.0	9.0	40.8	42.4	3.9	0	2.0	1.6
43325	2.5	10.1	46.6	49.3	3.8	0	2.5	2.7
43330	3.0	11.1	50.0	52.8	4.5	0	3.0	2.8
43335	3.5	12.1	51.4	54.2	5.2	0	3.0	2.8
43340	4.0	12.1	58.4	61.2	5.7	1.8	3.0	2.8
43350	5.0	14.1	63.5	67.4	5.8	2.6	4.0	3.9
43360	6.0	16.1	72.0	76.4	6.5	3.1	4.0	4.4
43380	8.0	22.1	78.7	82.3	11.3	0	4.0	3.6
43382	10.0	26.2	79.9	83.4	12.9	0	4.0	3.5
43384	12.0	30.2	104.8	108.4	14.4	0	4.0	3.6
43386	14.0	42.2	108.2	111.6	16.1	0	4.0	3.4
43388	16.0	42.2	156.2	159.6	16.1	0	4.0	3.4
43399	18.0	48.2	134.0	137.0	19.9	0	4.0	3.0
43321	20.0	54.3	159.7	162.9	22.1	0	4.0	3.2
43322	22.0	60.3	161.3	164.1	22.6	0	4.0	2.8

**Type 4**



Part Number	A Nominal Inlet Diameter	B Body Diameter O.D.	C Body Length	D Overall Length	E Offset To C/L	F Offset To C/L	G Inlet Length	H Outlet Length
44740	4.0	12.1	58.4	61.2	29.2	1.8	3.0	2.8
44750	5.0	14.1	63.6	67.5	31.8	2.6	4.0	3.9
44760	6.0	16.1	72.0	76.4	36.0	3.1	4.0	4.4
44780	8.0	22.1	78.7	82.3	39.3	0	4.0	3.6
44782	10.0	26.2	79.9	83.4	39.9	0	4.0	3.5
44784	12.0	30.2	104.8	108.4	52.4	0	4.0	3.6
44786	14.0	42.2	108.2	111.5	54.1	0	4.0	3.3



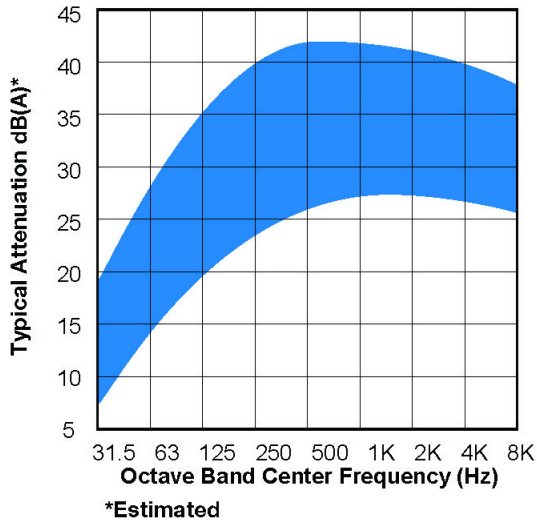
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LT33503 5/01



# Special "400" Level Exhaust Silencers

## Typical Attenuation Curve dB(A)\*

(ACTUAL ATTENUATION MAY VARY ACCORDING TO APPLICATION)



### Application:

These silencers are recommended where ambient noise is low and a high degree of silencing is necessary.

### Construction:

**Aluminized Steel:** Nelson Silencers through 26" O.D. are fabricated of aluminized steel as standard materials. This material has a maximum operating temperature of 1250°F.

**Mild Steel/Aluminized Steel:** Nelson Silencers 30" O.D. and larger are fabricated of mild steel and aluminized steel. All silencers 30" O.D. and larger have aluminized steel bodies with all other components fabricated from mild steel.

**Silicone Aluminum Paint:** Nelson Silencers through 26" O.D. are given a coat of high heat resistant silicone aluminum paint.

**Primer/Silicone Aluminum Paint:** Nelson Silencers 30" O.D. and larger are given a coat of high heat, rust inhibiting primer and then a topcoat of high heat resistant silicone aluminum paint. Physical properties are maintained up to 900°F\* on aluminized steel and 1100°F\* on mild steel.

### Sample Specification:

The silencer is to be a Nelson Hospital "400" Level Silencer constructed of aluminized steel (26" body diameter and smaller) or mild steel/aluminized steel (larger than 26" body diameter) with all welded construction and suitable for mounting in any position. The silencer shall be complete with the following Nelson accessories:



### "F" Mounting Flange:

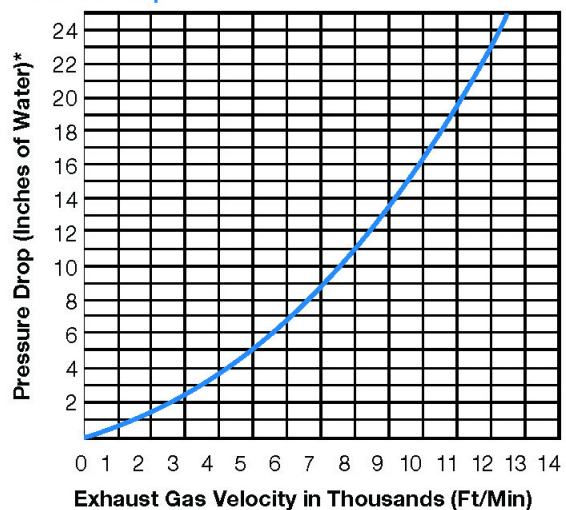
Standard in sizes 4" to 14". Drilling matches 125/150# ASA standard.

Companion flanges available for 4" to 22".

### Construction Features:

Double wrapped body is standard on all "400" Level Special Silencers.

### Pressure Drop

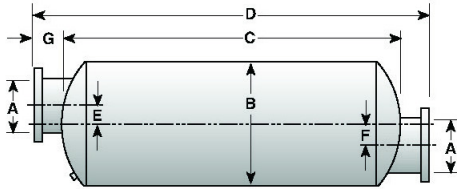


**Note:** When figuring pressure drop for side inlet or middle side inlet add 3" H<sub>2</sub>O to back pressure shown on above curve.

\*Estimated

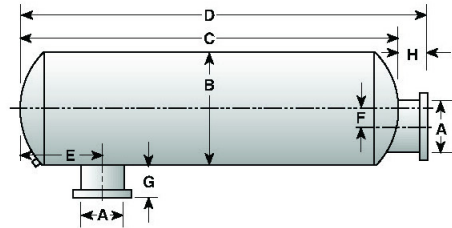


### Type 1



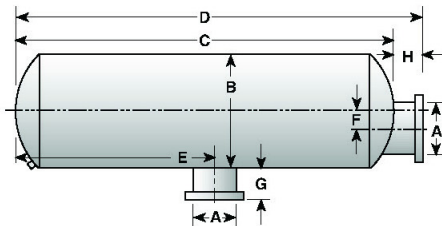
Part Number	A Nominal Inlet Diameter	B Body Dia. O.D.	C Body Length	D Overall Length	E Offset To C/L	F Offset To C/L	G Inlet Length
41440*	4.0	14.1	66.5	72.0	4.0	4.0	2.8
41450*	5.0	16.1	72.4	80.0	4.7	4.7	3.8
41460*	6.0	18.1	82.7	90.0	5.0	5.0	3.7
41480	8.0	26.1	91.7	98.9	0	0	3.6
41482	10.0	30.2	104.8	112.0	0	0	3.4
41484	12.0	36.2	130.6	137.0	0	0	3.2
41486	14.0	42.2	132.2	138.9	0	0	3.4

### Type 3



Part Number	A Nominal Inlet Diameter	B Body Dia. O.D.	C Body Length	D Overall Length	E Offset To C/L	F Offset To C/L	G Inlet Length	H Outlet Length
43440	4.0	14.1	66.6	69.3	5.8	4.0	3.0	2.7
43450	5.0	16.1	72.4	77.0	6.0	4.7	4.0	3.8
43460	6.0	18.1	82.6	86.3	6.8	5.0	4.0	3.7
43480	8.0	26.2	91.8	95.5	10.9	0	4.0	3.7
43482	10.0	30.2	104.8	108.4	12.4	0	4.0	3.6
43484	12.0	36.2	130.6	133.8	14.3	0	4.0	3.2
43486	14.0	42.2	132.2	135.6	16.1	0	4.0	3.4

### Type 4



Part Number	A Nominal Inlet Diameter	B Body Dia. O.D.	C Body Length	D Overall Length	E Offset To C/L	F Offset To C/L	G Inlet Length	H Outlet Length
44840	4.0	14.1	66.5	69.2	33.3	4.0	3.0	2.7
44850	5.0	16.1	72.4	76.2	36.2	4.7	4.0	3.8
44860	6.0	18.1	82.6	86.3	41.3	5.0	4.0	3.7
44880	8.0	26.2	91.9	95.5	46.0	0	4.0	3.6
44882	10.0	30.2	104.8	108.2	52.4	0	4.0	3.4
44884	12.0	36.2	130.6	133.9	65.3	0	4.0	3.3
44886	14.0	42.2	132.2	135.6	66.1	0	4.0	3.4

\* Inlet and outlet offset from centerline of silencer as shown in dimension E and F.

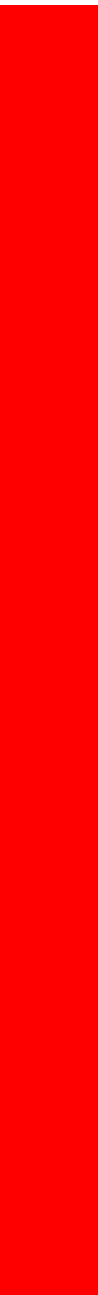
Drains are standard on all silencers with a 9" body diameter or larger.

**Note: Specifications are subject to change without notice.**

**Note: All dimensions are in inches.**



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