



Universal Emission Technologies
A Division of Universal

**QuietShield™ with
GreenShield® technology**

Compliance Guide to EPA's 40CFR Part 63



**CI (Diesel) RICE NESHAP
Compliance Guide**

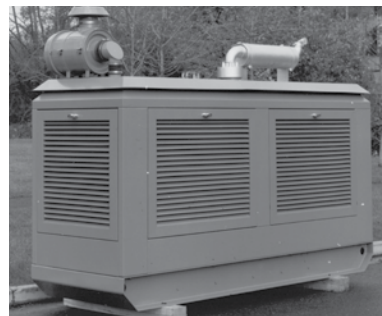
Exhaust System Considerations
Serviceable Catalyst Systems
Maintenance Free Catalyst Systems
Compliance Catalyst Monitor

QuietShield™ with GreenShield® Technology

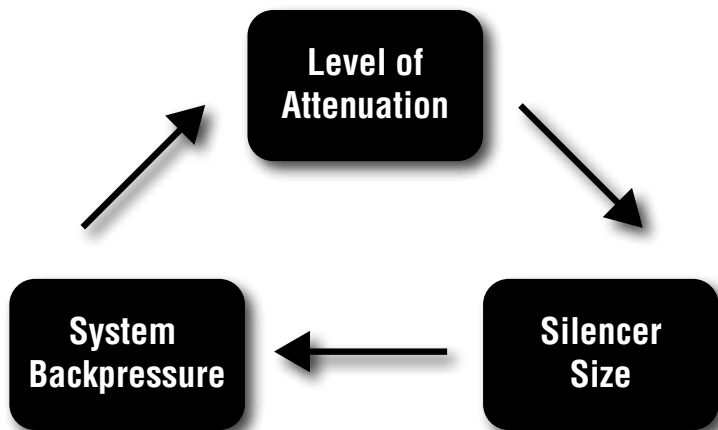
QuietShield™ Catalyst/Silencer *Quieter, less restriction, and smaller*

At Universal, we have a history of developing innovative sound and emission control devices. Our innovation tradition was established with Nelson and Nelson-Burgess' know-how throughout the years. With the new QuietShield™ Catalyst/Silencer, we did not disappoint our tradition.

There are three design components to consider when selecting a catalyst/silencer—level of attenuation, size, and backpressure. The rule of thumb is “You can have two, but not three.” To gain in one area, another area needs to suffer.



Is space a premium? Try QuietShield™.



The QuietShield™ breaks the rule of thumb by allowing all three! Universal took the best of both its traditional designs, Nelson and Nelson-Burgess, and combined them into a breakthrough in catalyst/silencer design. It incorporates reactive and absorptive silencer technologies to provide a smaller, less restrictive and higher performing silencer.

FEATURE	BENEFIT
35% Better Acoustic Performance	Reduces chance of noise complaints Utilize a lesser grade of silencer for cost savings
50% Less Backpressure	Engines operate more efficiently Less wear and tear on engine components
5–15% Smaller Size	Easier to fit into tight enclosed packages and equipment rooms Easier to install = less labor cost Fits in the same footprint of existing silencer

⚙️ Dimensions are in inches unless otherwise stated. All weights are in lbs and are approximate.

⚙️ All information correct at printing. Universal has a policy of continuous improvement. Therefore we reserve the right to change the specifications of these silencers without notice.

QuietShield™ with GreenShield® Technology

Benefits

- 70% CO reduction efficiency in a compact package
- Stainless steel catalyst substrates built for superior durability
- Maintenance free design—no catalyst cleaning
- Available with or without integrated silencing. Catalytic Silencers available in commercial, critical and hospital grades
- Interchangeable with existing silencer with no or limited modifications
- Available with various optional mounting brackets

Specifications

Fuel	RICE NESHAP compliance requires the use of USLF Diesel (< 15 ppm) for most engines. See page 1.3 or 1.6 for major or area source requirements.
Flow-Rate	Up to 8,774 SCFM: (22,236 ACFM at 900°F) for ULSF (< 15 ppm)
Emissions Reduction (nominal)	CO: 70%
Housing Material	Painted carbon steel using high temperature aluminum paint. Optional stainless steel also available.
Sensor Ports	Inlet: (2) ¾" female NPT and (1) female M18 fittings located on inlet nozzle Outlet: (2) ¾" female NPT and (1) female M18 fittings located on outlet nozzle

Selection

- 1 Determine the engine's max exhaust flow rate (SCFM).

- 2 Determine insertion loss required then refer to the corresponding section:
 - A** 0–12 dB Section 4.3
 - B** Commercial Grade, 15–25 dB Section 4.4
 - C** Critical Grade, 25–35 dB Section 4.5
 - D** Hospital Grade, 35–42 dB Section 4.6

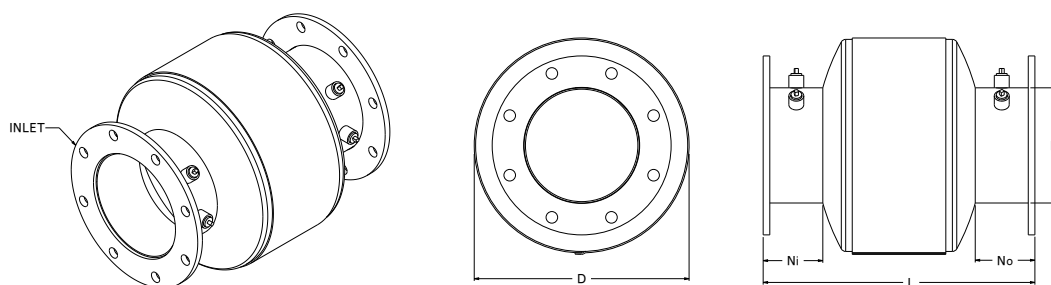
- 3 Determine inlet size.

- 4 Select part number and place order.

• Dimensions are in inches unless otherwise stated. All weights are in lbs and are approximate.
 • All information correct at printing. Universal has a policy of continuous improvement. Therefore we reserve the right to change the specifications of these silencers without notice.

QuietShield™ with GreenShield® Technology

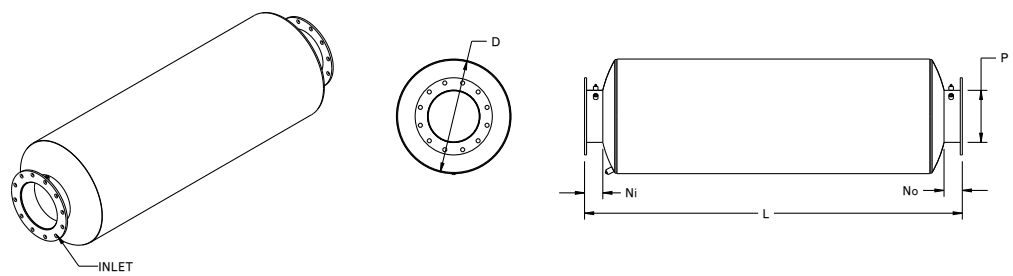
0-12 (dB) Insertion Loss, End-In, End-Out



Maximum flow rate [scfm]	P	D	L	Ni, No	Estimated System Weight (lbs)	System Part Number
548	5	10	18.5	4.5	40	18-510500
863	5	12	18.5	4.5	45	18-510501
863	6	12	19.5	4.5	55	18-510502
1035	5	12	18.5	4.5	50	18-510503
1035	6	12	19.5	4.5	60	18-510504
1035	8	12	20.5	4.5	75	18-510505
1221	5	14	18.5	4.5	50	18-510506
1221	6	14	19.5	4.5	60	18-510507
1221	8	14	20.5	4.5	80	18-510508
1644	6	16	19.5	4.5	60	18-510509
1644	8	16	20.5	4.5	85	18-510510
1644	10	16	20.5	4.5	110	18-510511
2259	6	18	19.5	4.5	65	18-510512
2259	8	18	20.5	4.5	90	18-510513
2259	10	18	20.5	4.5	120	18-510514
2974	8	20	20.5	4.5	100	18-510515
2974	10	20	20.5	4.5	135	18-510516
2974	12	20	22.0	4.5	155	18-510517
3615	8	22	20.5	4.5	105	18-510518
3615	10	22	20.5	4.5	140	18-510519
3615	12	22	22.0	4.5	160	18-510520
4317	10	24	20.5	4.5	145	18-510521
4317	12	24	22.0	4.5	170	18-510522
4317	14	24	24.0	4.5	205	18-510523
5489	12	28	22.0	4.5	180	18-510524
5489	14	28	24.0	4.5	215	18-510525
5489	16	28	24.0	4.5	240	18-510526
6349	12	30	22.0	4.5	200	18-510527
6349	14	30	24.0	4.5	230	18-510528
6349	16	30	24.0	4.5	315	18-510529
7154	14	36	24.0	4.5	235	18-510530
7154	16	36	24.0	4.5	320	18-510531
7154	18	36	24.0	4.5	340	18-510532
8774	16	36	24.0	4.5	315	18-510533
8774	18	36	24.0	4.5	340	18-510534
8774	20	36	24.0	4.5	345	18-510535

QuietShield™ with GreenShield® Technology

Commercial Grade Silencer, 15–25 (dB) Insertion Loss, End-In, End-Out

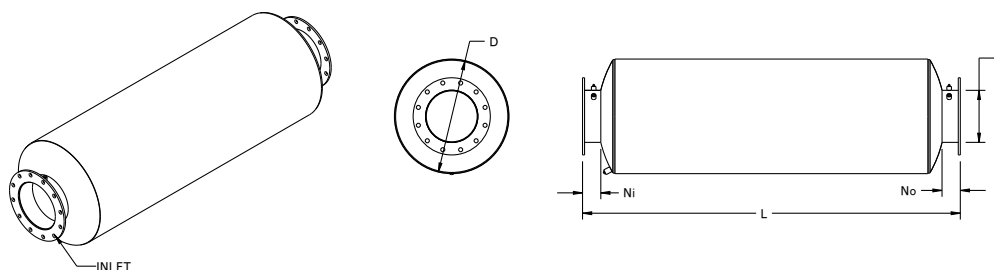


Maximum flow rate [scfm]	P	D	L	Ni, No	Estimated System Weight (lbs)	System Part Number
548	5	12	39	4.5	55	18-510536
863	5	12	39	4.5	60	18-510537
863	6	14	44	4.5	85	18-510538
1035	5	12	39	4.5	65	18-510539
1035	6	14	44	4.5	90	18-510540
1035	8	18	54	4.5	160	18-510541
1221	6	14	44	4.5	90	18-510542
1221	8	18	54	4.5	165	18-510543
1644	8	18	54	4.5	170	18-510544
1644	10	22	64	4.5	275	18-510545
2259	8	18	54	4.5	180	18-510546
2259	10	22	64	4.5	285	18-510547
2974	10	22	64	4.5	280	18-510548
2974	12	26	74	4.5	420	18-510549
3615	10	22	64	4.5	300	18-510550
3615	12	26	74	4.5	440	18-510551
4317	12	26	74	4.5	445	18-510552
4317	14	30	84	4.5	620	18-510553
5489	14	30	84	4.5	630	18-510554
5489	16	36	99	4.5	985	18-510555
6349	14	30	84	4.5	640	18-510556
6349	16	36	99	4.5	1000	18-510557
7154	16	36	99	4.5	1005	18-510558
7154	18	40	109	4.5	1275	18-510559
8774	16	36	99	4.5	1020	18-510560
8774	18	40	109	4.5	1290	18-510561
8774	20	42	114	4.5	1390	18-510562

⚙️ Dimensions are in inches unless otherwise stated. All weights are in lbs and are approximate.
 ⚙️ All information correct at printing. Universal has a policy of continuous improvement. Therefore we reserve the right to change the specifications of these silencers without notice.

QuietShield™ with GreenShield® Technology

Critical Grade Silencer, 25–35 (dB) Insertion Loss, End-In, End-Out



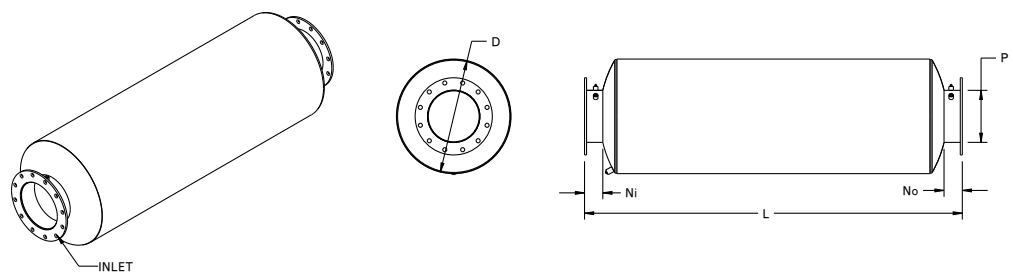
Maximum flow rate [scfm]	P	D	L	Ni, No	Estimated System Weight (lbs)	System Part Number
548	5	14	51	4.5	85	18-510563
863	5	14	51	4.5	90	18-510564
863	6	16	57	4.5	125	18-510565
1035	5	14	51	4.5	95	18-510566
1035	6	16	57	4.5	130	18-510567
1035	8	20	69	4.5	220	18-510568
1221	6	16	57	4.5	130	18-510569
1221	8	20	69	4.5	225	18-510570
1644	8	20	69	4.5	230	18-510571
1644	10	24	81	4.5	355	18-510572
2259	8	20	69	4.5	240	18-510573
2259	10	24	81	4.5	360	18-510574
2974	10	24	81	4.5	365	18-510575
2974	12	28	93	4.5	525	18-510576
3615	10	24	81	4.5	380	18-510577
3615	12	28	93	4.5	545	18-510578
4317	12	28	93	4.5	550	18-510579
4317	14	36	117	4.5	1040	18-510580
5489	14	36	117	4.5	1050	18-510581
5489	16	40	129	4.5	1330	18-510582
6349	14	36	117	4.5	1060	18-510583
6349	16	40	129	4.5	1340	18-510584
7154	16	40	129	4.5	1345	18-510585
7154	18	42	135	4.5	1440	18-510586
8774	16	40	129	4.5	1360	18-510587
8774	18	42	135	4.5	1455	18-510588
8774	20	48	153	4.5	1975	18-510589

⚙️ Dimensions are in inches unless otherwise stated. All weights are in lbs and are approximate.

⚙️ All information correct at printing. Universal has a policy of continuous improvement. Therefore we reserve the right to change the specifications of these silencers without notice.

QuietShield™ with GreenShield® Technology

Hospital Grade Silencer, 35–42 (dB) Insertion Loss, End-In, End-Out



Maximum flow rate [scfm]	P	D	L	Ni, No	Estimated System Weight (lbs)	System Part Number
548	5	16	57	4.5	110	18-510590
863	5	16	57	4.5	115	18-510591
863	6	20	69	4.5	205	18-510592
1035	5	16	57	4.5	120	18-510593
1035	6	20	69	4.5	205	18-510594
1035	8	24	81	4.5	325	18-510595
1221	6	20	69	4.5	210	18-510596
1221	8	24	81	4.5	330	18-510597
1644	8	24	81	4.5	335	18-510598
1644	10	30	99	4.5	585	18-510599
2259	8	24	81	4.5	340	18-510600
2259	10	30	99	4.5	595	18-510601
2974	10	30	99	4.5	600	18-510602
2974	12	36	117	4.5	935	18-510603
3615	10	30	99	4.5	610	18-510604
3615	12	36	117	4.5	955	18-510605
4317	12	36	117	4.5	960	18-510606
4317	14	40	129	4.5	1210	18-510607
5489	14	40	129	4.5	1220	18-510608
5489	16	42	135	4.5	1300	18-510609
6349	14	40	129	4.5	1230	18-510610
6349	16	42	135	4.5	1305	18-510611
7154	16	42	135	4.5	1315	18-510612
7154	18	48	153	4.5	1770	18-510613
8774	16	42	135	4.5	1330	18-510614
8774	18	48	153	4.5	1785	18-510615
8774	20	54	171	4.5	2285	18-510616

⚠ Dimensions are in inches unless otherwise stated. All weights are in lbs and are approximate.
 ⚠ All information correct at printing. Universal has a policy of continuous improvement. Therefore we reserve the right to change the specifications of these silencers without notice.

See back page for ordering information | www.universalemissiontechnologies.com