Linx Industries

Welcome on board

Linx Industries manufactures HVAC spiral round and oval ductwork for the ventilation industry. Our solutions for the marine and offshore industries are based on the same well-known, tested and documented products we have delivered to large construction projects around the world.

Linx offers both insulated (double wall) and noninsulated (single wall) duct and fittings. Pieces slip together even easier with the Lindab Safe gasketed connection. Products are manufactured in the United States, so you can trust your order to be delivered on time and direct to the jobsite when required.

ProCoat™ Custom Color Ductwork

Add a touch of sophistication by choosing a custom color. Linx carries six coating options, but custom colors are available upon request. Our stock colors include red, blue, gray, black, and green, but perhaps a copper color is just what your project needs.

ProCoat Plus™ Coated Ductwork

Epoxy coated duct systems for environments requiring more protection. ProCoat Plus products are coated both inside and outside of duct.

Jet Black	Carmine Red	Signal Blue	Pure Orange	Moss Green	Signal White
RAL 9005	RAL 3002	RAL 5005	RAL 2004	RAL 6005	RAL 9003

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Products

Single Wall Marine Specification

Material

1. Ductwork shall be fabricated from (* not available in die-stamped fittings) from one or more of the following:
    a. G60 galvanized steel conforming to ASTM A653 and A924;
    b. G90 galvanized steel conforming to ASTM A653 and A924;
    c. 304L-2B stainless steel* conforming to ASTM A240;
    d. 316L-2B stainless steel* conforming to ASTM A240; or
    e. Aluminum Type 3003-H14* conforming to ASTM B209.
    f. Stainless steel fittings provided with a 2B mill finish.
2. ProCoat™ and ProCoat Plus™ epoxy coated ductwork are available options. Coating is an average thickness of 4 mils (0.004"). Coating shall meet or exceed 1,000 hour salt spray test per ASTM B117-97. (Standard color is white, however, consult the factory for additional color options). ProCoat products have a minimum surface hardness of 2H when tested per ASTM D33-63-92A. ProCoat Plus™ is coated both inside and outside of duct.
3. Antimicrobial agents are available options with double and single wall systems and shall be EPA listed. Antimicrobial coated spiral duct and fittings are treated with a factory applied antimicrobial agent.

Metal Thickness

1. The specified material thickness shall be no less than the latest Linx Industries published catalog.
2. Unless otherwise noted, all duct and fittings shall be suitable for +10" water gauge (2.5 Kpa).
3. Please consult the factory for all negative pressure applications.

Construction

1. Spiral Duct
    a) All round spiral duct 8" (200 mm) and larger shall incorporates multiple corrugations between the spiral lock seams.
    b) The duct inside diameters shall be calibrated to the latest Linx Industries published dimensional tolerance standards.
    c) Spiral duct seam slippage shall be prevented by means of a flat spiral seam with mechanically formed indentation evenly spaced along the spiral lock seam.
2. Fittings shall be manufactured using one or more of the following construction methods:
    a) Overlapped edges are stitched or spot welded along the entire length of the fitting;
    b) Standing seam gore locked and internally sealed;
    c) Button punched and internally sealed; or
    d) Round elbows 3" through 12" (80 mm through 315 mm) diameter shall be die stamped and continuously stitched welded.
    e) All end shall have a rolled over edge for added strength and rigidity.
3. Dampers – All volume and balancing dampers shall be Linx Industries type DSU or DTU as specified in the contract documents.
    a) Dampers shall be fitting sized to slip into the spiral duct with a double-lipped, “U” profile, EPDM rubber gaskets.
    b) Damper shall have all of the following features:
        i. Locking quadrant with blade position indicator
        ii. 2" (50 mm) sheet metal insulation stand-off
        iii. Integral shaft/blade assembly
        iv. Shaft mounted load bearing bushings
        v. Gasketed shaft penetrations to minimize air leakage

Connections – Fitting ends shall be sized to slip-fit into the spiral duct of the same nominal size. Fitting to fitting connections shall be made by the use of duct size “MF” couplings; duct to duct connections require the fitting size “NPU” couplings.

Joint Sealing

1. The addition of any externally applied sealants shall not be required.
2. Fitting ends shall be equipped with factory installed, double-lipped, “U” profile EPDM rubber gaskets.
3. The gasket shall be located in a groove at the end of the fitting and use a spot welded stainless steel band located in a groove at the end of the fitting.
4. In order to achieve optimum sealing for diameters between 3" (80 mm) and 20" (508 mm), different size gaskets shall be used.
5. The gasket shall be classified by Underwriters Laboratories (UL) for a flame spread index and smoke developed index of 0/0 in accordance with ASTM E84-91a.
6. When installed in spiral duct per the Linx Industries’ currently published installation instructions, the gasket shall create a seal against the interior of the spiral duct.
7. The system tightness shall be factory warranted to meet a Leakage Class 3 performance.

Double Wall Marine Specification

Material

1. Ductwork shall be fabricated from (* not available in die-stamped fittings) from one or more of the following:
    a. G60 galvanized steel conforming to ASTM A653 and A924;
    b. G90 galvanized steel conforming to ASTM A653 and A924;
    c. 304L-2B stainless steel* conforming to ASTM A240;
    d. 316L-2B stainless steel* conforming to ASTM A240; or
    e. Aluminum Type 3003-H14* conforming to ASTM B209.
    f. Stainless steel fittings provided with a 2B mill finish.
2. ProCoat™ and ProCoat Plus™ epoxy coated ductwork are available options. Coating is an average thickness of 4 mils (0.004"). Coating shall meet or exceed 1,000 hour salt spray test per ASTM B117-97. (Standard color is white, however, consult the factory for additional color options). ProCoat products have a minimum surface hardness of 2H when tested per ASTM D33-63-92A. ProCoat Plus™ is coated both inside and outside of duct.
3. Antimicrobial agents are available options with double and single wall systems and shall be EPA listed. Antimicrobial coated spiral duct and fittings are treated with a factory applied antimicrobial agent.
4. Fiberglass insulation shall be 1" (2" optional) 1.0 lb/ft^3 USCG/IMD approved (Certificate must be made available upon request) with a maximum conductivity factor (k) of 0.26 BTU-in/hr x ft^2 x °F at 75°F mean ambient temperature (R=3.8 for 1" insulation; R=7.7 for 2" insulation).

5. Retaining fabric (used on perforated duct) shall be 0.008” thick, 15.6 lb/ft^3 density non-woven polyester fabric with an air permeability rate of 9.2 ft^3/ft^2 x s.
6. The insulation stop shall be EnergyX as manufactured by Linx Industries with a maximum conductivity factor (k) of 0.28 BTU-in/hr x ft^2 x °F and operating temperature range of -70°F to +220°F.
7. The perforated inner liner (available in G60 only) shall consist of 0.125” diameter perforations on 0.250" staggered centers corresponding to an overall open area of 23%.

Metal Thickness

1. The specified material thickness shall be no less than the latest Linx Industries’ published catalog.
2. Unless otherwise noted, all duct and fittings shall be suitable for +10" water gauge (2.5 Kpa).
3. Please consult the factory for all negative pressure applications.

Construction

1. Double Wall Construction
    a) Double wall duct and fittings shall consist of: an outer pressure shell; an inner perforated liner (available in G60 only) on duct and a solid liner on fittings; fiberglass insulation; retaining fabric (when a perforated inner liner is specified); and EnergyX™ insulation stops as a factory supplied integral assembly.
    b) The outer shell shall be the pressure shell.
    c) The outer pressure shell diameter shall be two times the insulation thickness larger than the inner liner.
    d) The duct size shall be reflected as the nominal clear inside (airside) diameter or the nominal diameter of the inner liner.
    e) The perforated liner on the spiral duct shall be integrally wrapped with a retaining fabric between the perforated inner liner and the fiberglass insulation. The retaining fabric shall be securely held by the spiral lockseam of the inner liner. This is to prevent the glass fibers tearing into the airstream and at the same time maintains the desired acoustical properties.
    f) Spiral duct shall have heavy duty spring clips evenly spaced around the duct circumference to maintain the inner liner concentric to the outer pressure shell.
    g) The ductwork assembly shall be classified by Underwriters Laboratories (UL) for a flame spread index and smoke developed index of 0/0 in accordance with ASTM E84-91a.
    h.) Perforated Metal Liner (duct only): Consists of 0.125" (3 mm) perforations on 0.250" (6 mm) staggered centers and 23% open area. Perforated liner is available in galvanized G60 only. All double wall fittings are manufactured with a solid inner liner; a perforated inner is available upon request.
    i.) Insulation (Linx Gasketed only): USCG/IMO certified glass fiber insulation will have a maximum conductivity factor (k) of 0.26 BTU-in/hr x ft^2 x °F at 75°F mean ambient temperature (R=3.8).
    j.) Insulation shall be 1” thick standard. 2” insulation thickness is an available option.
    k.) EnergyX™ Insulation stop (Linx Gasketed only): Constructed of a closed-cell elastomeric foam with a maximum conductivityfactor (k) of 0.28 BTU-in/hr x ft^2 x °F and an operating temperature range of -70°F to +220°F.
    l.) Retaining Fabric: 0.008” thick, 15.6 lb/ft^3 density non-woven polyester fabric with an air permeability rate of 9.2 ft^3/ft^2 x s.

2. Spiral Duct
    a) All round spiral duct 8" (200 mm) and larger shall incorporates multiple corrugations between the spiral lock seams.
    b) The duct inside diameters shall be calibrated to the latest Linx Industries published dimensional tolerance standards.
    c) Spiral duct seam slippage shall be prevented by means of a flat spiral seam with mechanically formed indentation evenly spaced along the spiral lock seam.

3. Fittings shall be manufactured using one or more of the following construction methods:
    a) Overlapped edges are stitched or spot welded along the entire length of the fitting;
    b) Standing seam gore locked and internally sealed;
    c) Button punched and internally sealed; or
    d) Round elbows 3" through 10" (80 mm through 300 mm) diameter shall be die stamped and continuously stitched welded.
    e) All end shall have a rolled over edge for added strength and rigidity.

4. Dampers – All volume and balancing dampers shall be Linx Industries type DSUI or DTUI as specified in the contract documents.
    a) Dampers shall be fitting sized to slip into the spiral duct with a double-lipped, “U” profile, EPDM rubber gaskets.
    b) Damper shall have all of the following features:
        i. Locking quadrant with blade position indicator
        ii. 2" (50 mm) sheet metal insulation stand-off
        iii. Integral shaft/blade assembly
        iv. Shaft mounted load bearing bushings
        v. Gasketed shaft penetrations to minimize air leakage

Connections – The duct and fittings shall in combination with each other shall go together as easily as single wall ductwork. Fitting ends shall be sized to slip-fit into the spiral duct of the same nominal size. Fitting to fitting connections shall be made by the use of duct size “MFI” couplings; duct-to-duct connections require the fitting size “NPUI” couplings.

Joint Sealing

1. The addition of any externally applied sealants shall not be required.
2. Fitting ends shall be equipped with factory installed, double-lipped, “U” profile EPDM rubber gaskets.
3. The gasket shall be located in a groove at the end of the fitting and use a spot welded stainless steel band located in a groove at the end of the fitting.
4. In order to achieve optimum sealing for diameters between 3" (80 mm) and 20" (508 mm), different size gaskets shall be used.
5. The gasket shall be classified by Underwriters Laboratories (UL) for a flame spread index and smoke developed index of 0/0 in accordance with ASTM E84-91a.
6. When installed per the Linx Industries’ currently published installation instructions, the fitting gasket shall create an air seal against the interior of the spiral duct.
7. The system tightness shall be factory warranted to meet a Leakage Class 3 performance.

Linx Gasketed Connection

Featuring Lindab Safe®

The Linx Gasketed Connection incorporates the Lindab Safe self-sealing duct system and is based on a “U”-profile, EPDM rubber gasket. This gasket is located in a groove at the end of the fitting and is securely attached by an stainless steel band. This design ensures that the rubber gasket is always held in the correct position.

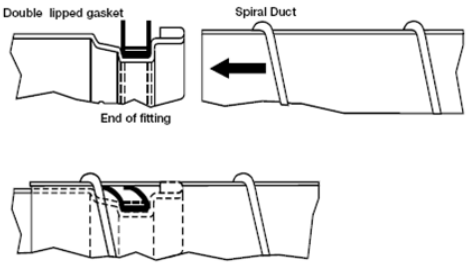
When the fitting is inserted into the spiral duct, the gasket folds back forming a seal against the inside of the spiral duct eliminating the need for any duct sealer.

In order to achieve optimum sealing for all diameters, various gasket sizes are used as shown in the table below.

The gasket is made from a material resistant to ozone, UV rays, and temperature fluctuations. The gasket is rated for temperatures from -20ºF to +212ºF (-29ºC to +100ºC).

Linx Industries is a licensed manufacturer of Lindab Safe products.

Benefits of the Lindab Safe



- A complete line of self-sealing spiral duct and fittings
- Factory installed gasket - no loose parts
- Fast and easy installation
- Environmentally friendly, no harmful sealers required
- Installation not contingent on weather
- Performance rated from -20ºF to +212ºF (-29ºC to +100ºC)
- Double lipped gasket minimizes the risk of leakage in the event of damage
- U.L. classified rating “0/0” (Flame Spread Index 0/ Smoke Developed Index 0)
- Rolled over edges for easier installation, reduces risk of injury and adds strength
- Adjustability - fittings can be rotated 360º during installation and still maintain the seal’s integrity

Designed by Diameter

Gasket connection for diameters 12" (315 mm) and smaller

Gasket Size by Diameter

Size (in/mm)	7/180	9/230	11/280
Dia (inch)	3-7	8-11	12
Dia (mm)	75-180	200-280	315

Assembly Instructions

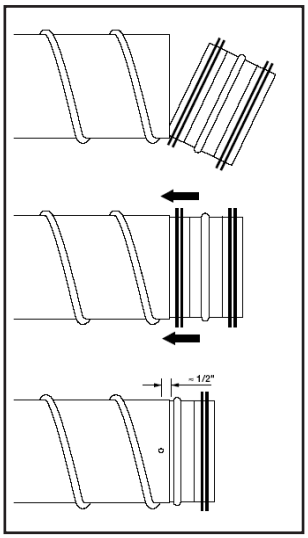
Preparations for assembly
Check that ducts and fittings to be used in the system are Linx Industries and are undamaged. Linx gasketed fittings must be used with calibrated spiral duct certified by Linx Industries.

Do not use ducts or fittings that have been damaged in such a way that they jeopardize the air tightness or structural strength of the system.

Store ducts and fittings in a well-ordered and weatherproof storage area to minimize the risk of damage.

Cut ducts at right angles. Carefully remove any burrs from cut edges. Installation is easier and the risk of damaging the gasket is reduced if there are no burrs.

Assembly
Start by inserting the turned-over edge of the fitting into the duct.



Check that the first lip of the gasket is in contact with the edge of the duct all the way around and sticks straight out so that the lip is not twisted in one direction or the other.

Push the end of the fitting into the duct. Turning the fitting slightly aids insertion. (Removal, if necessary, is also aided by turning.)

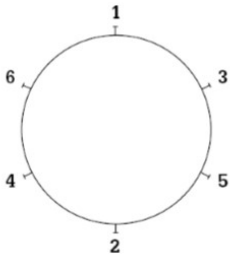
Secure the fitting in the duct using self-tapping screws or airtight pop rivets.

Fasteners should be positioned 1/2" (13 mm) from the bead to prevent damage to the gasket.

Placement of the fastening screws should be opposite from one another evenly spaced around the circumference, much like the procedure for tightening lug nuts on a tire (see diagram). Start where the distance between the duct and the fitting is largest. Screws should be placed approximately 1/2" (13 mm) from the bead in order to avoid damaging the Lindab Safe gasket. In the event of incorrect installation, holes caused by screws or pop rivets must be sealed before reassembly.

Quantities and sizes to be used are listed in the below table.

Duct Dia.	Screw Dia.	Quantity
inch(mm)	inch(mm)	
3 - 5 (75-125)	⅛ (3)	2
6 - 10 (150-250)	⅛ (3)	3
12 (315)	⅛ (3)	4

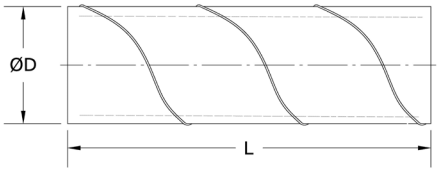


Always start the first fastener at the largest radial gap between fitting and duct. Be sure to achieve even distribution around the circumference.

Carefully seal any holes left by measurements, removed screws, pop rivets, etc.

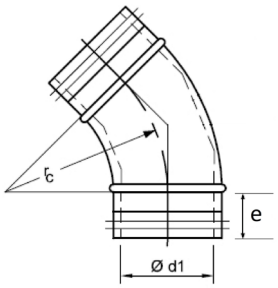
Tolerance, Gauge, & e-dimension

Tolerance for spiral duct



Larger sizes are available upon request.

Tolerance for fittings



Larger sizes are available upon request.

Metric

ØD (mm)	ØD Tolerance (mm) min.-max.	Gauge
75	74.9 - 75.4	28
80	80.0 - 80.5	28
100	100.3 - 100.8	28
125	125.7 - 126.2	28
150	151.1 - 151.6	28
160	160.0 - 160.6	28
180	176.5 - 177.1	28
200	201.9 - 202.5	28
224	227.3 - 227.9	28
250	252.7 - 253.4	28
300	303.5 - 304.2	28
315	315.0 - 356.0	28

Ød (mm)	Ød Tolerance (mm) min.-max.	Pressed Gauge	Fabricated Gauge	e (mm)
75	73.7 - 74.1	24	24	41
80	78.8 - 79.3	n/a	24	41
100	99.1 - 99.5	24	24	41
125	124.5 - 124.9	24	24	41
150	149.8 - 150.3	24	24	41
160	158.7 - 159.3	24	24	41
180	175.1 - 175.6	24	24	41
200	200.4 - 201.0	24	24	41
224	225.7 - 226.3	n/a	24	41
250	251.0 - 251.7	24	24	60
300	301.8 - 302.5	24	24	60
315	313.4 - 314.3	n/a	24	60

Imperial

ØD (inch)	ØD Tolerance (in) min.-max.	Gauge
3	2.950-2.969	28
4	3.950-3.969	28
5	4.950-4.969	28
6	5.950-5.969	28
7	6.950-6.972	28
8	7.950-7.972	28
9	8.950-8.972	28
10	9.950-9.976	28
12	11.950-11.976	28

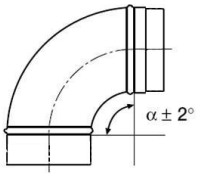
Ød (inch)	Ød Tolerance (in) min.-max.	Pressed Gauge	Fabricated Gauge	e (inch)
3	2.902-2.917	24	24	1.625
4	3.902-3.917	24	24	1.625
5	4.902-4.917	n/a	24	1.625
6	5.898-5.917	24	24	1.625
7	6.894-6.913	n/a	24	1.625
8	7.890-7.913	24	24	1.625
9	8.886-8.909	n/a	24	1.625
10	9.882-9.909	24	24	2.375
12	11.882-11.909	24	24	2.375

Tolerances for Spiral

Weight Tolerance
±10%

Thickness Tolerance
±10%

Angular Tolerance

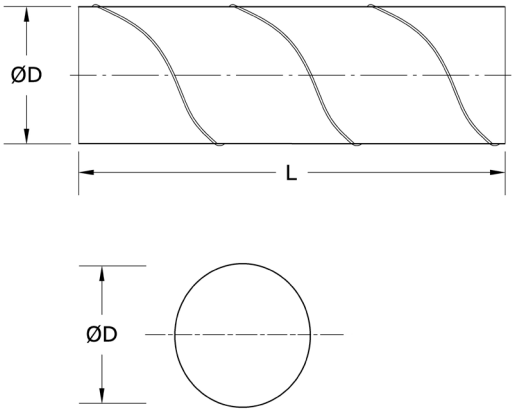


Length Tolerances

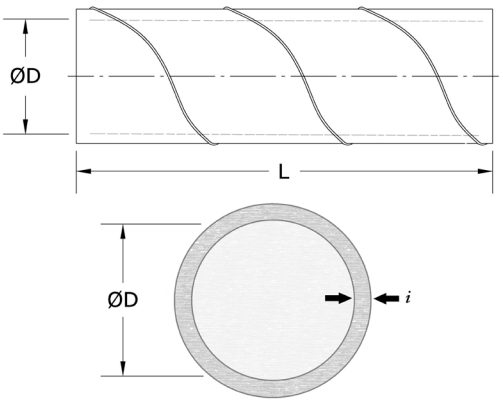
Length -L, H, e, D, d		Tolerances	
inch	mm	inch	mm
1 - 10	25.4 - 254	± 0.375	± 9.5
12	304.8 - 406.4	± 0.625	± 15.9

Spiral ducts

SR/SRIM



Spiral lock seam duct
- single wall
- evenly spaced integral seam locking feature
- corrugations on duct 8" (200 mm) diameter and larger
- standard length (L) = 120" (3050 mm)
- minimum length is 12" (300 mm)
- special orders taken in increments of 1" (25 mm)



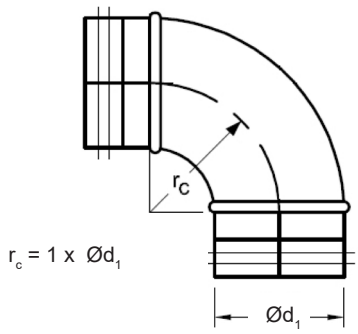
Spiral lock seam duct
- double wall/insulated
- evenly spaced integral seam locking feature
- corrugations on duct 8" (200 mm) diameter and larger
- perforated inner liner
- standard length (L) = 120" (3050 mm)
- minimum length is 12" (300 mm)
- special orders taken in increments of 1" (25 mm)
- “i” = Insulation thickness

Order Example SR # #
- Model
- ØD (in/mm)
- Length (L) (in/mm)

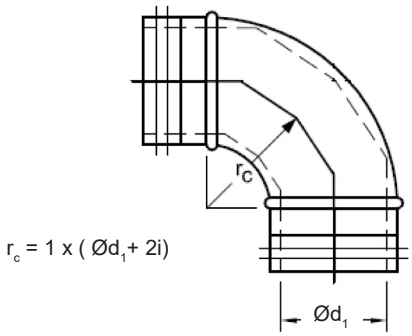
Order Example SRIM # # #
- Model
- ØD (in/mm)
- Length (L) (in/mm)
- Insulation thickness (in/mm)

90º Elbows

BU90/BUIM90



90º Elbow
- single wall
- die stamped
- continuous stitch welded
- rolled edges
- supplied with Lindab Safe gasket



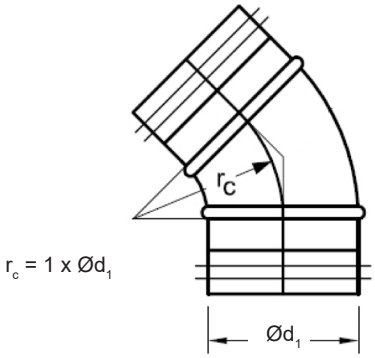
90º Elbow
- double wall/insulated
- die stamped
- continuous stitch welded
- rolled edges
- supplied with Lindab Safe gasket on outer dimension
- “i” = Insulation thickness

Order Example BU90 # #
Model
Ød$_1$ (in/mm)

Order Example BUIM90 # #
Model
Ød$_1$ (in/mm)
Insulation thickness (in/mm)

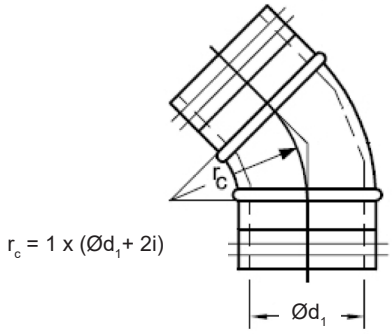
45º Elbows

BU45/BUIM45



45º Elbow
- single wall
- die stamped
- continuous stitch welded
- rolled edges
- supplied with Lindab Safe gasket

Order Example BU45 # #
Model
Ød$_1$ (in/mm)

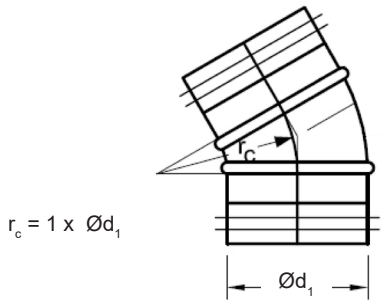


45º Elbow
- double wall/insulated
- die stamped
- continuous stitch welded
- rolled edges
- supplied with Lindab Safe gasket on outer dimension
- “i” = Insulation thickness

Order Example BUIM45 # #
Model
Ød$_1$ (in/mm)
Insulation thickness (in/mm)

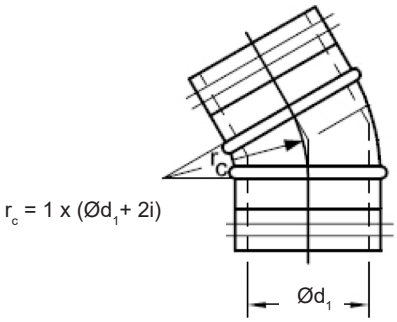
30º Elbows

BU30/BUIM30



30º Elbow
- single wall
- die stamped
- continuous stitch welded
- rolled edges
- supplied with Lindab Safe gasket

Order Example BU30 # #
Model
Ød$_1$ (in/mm)

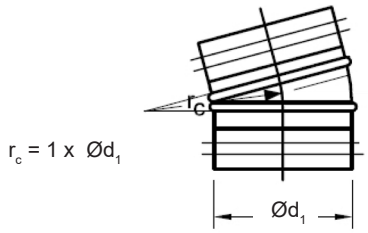


30º Elbow
- double wall/insulated
- die stamped
- continuous stitch welded
- rolled edges
- supplied with Lindab Safe gasket on outer dimension
- “i” = Insulation thickness

Order Example BUIM30 # #
Model
Ød$_1$ (in/mm)
Insulation thickness (in/mm)

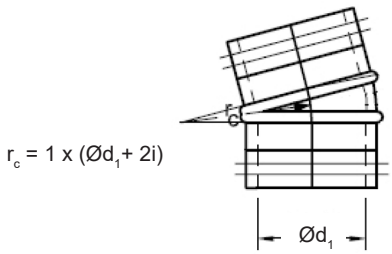
15º Elbows

BU15/BUIM15



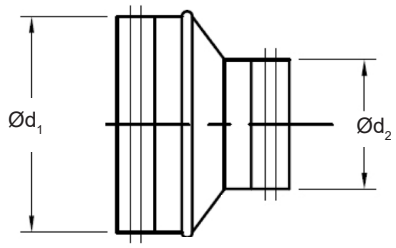
15º Elbow
- single wall
- die stamped
- continuous stitch welded
- rolled edges
- supplied with Lindab Safe gasket

Order Example BU15 # #
Model
Ød$_1$ (in/mm)

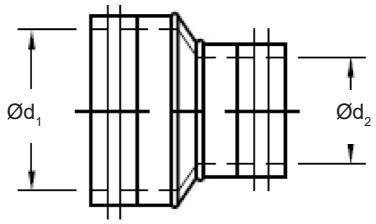


15º Elbow
- double wall/insulated
- die stamped
- continuous stitch welded
- rolled edges
- supplied with Lindab Safe gasket on outer dimension
- “i” = Insulation thickness

Order Example BUIM15 # #
Model
Ød$_1$ (in/mm)
Insulation thickness (in/mm)



Concentric Reducer
- single wall
- supplied with Lindab Safe gasket



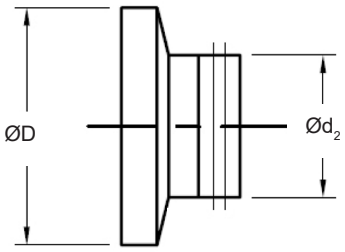
Concentric Reducer
- double wall/insulated
- inner shell fabricated
- supplied with Lindab Safe gasket on outer dimension
- “i” = Insulation thickness

Order Example RCU # #
- Model
- Ød1 (in/mm)
- Ød2 (in/mm)

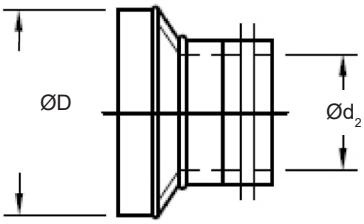
Order Example RCUIM # # #
- Model
- Ød1 (in/mm)
- Ød2 (in/mm)
- Insulation thickness (in/mm)

Reducers

RCFU/RCFUIM



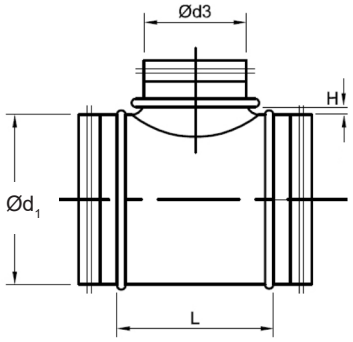
Concentric Reducer
- single wall
- ØD = duct size slips over fitting end
- inner shell fabricated
- supplied with Lindab Safe gasket



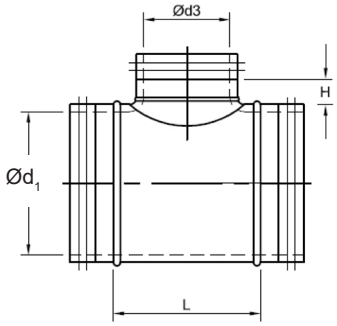
Concentric Reducer
- double wall/insulated
- ØD = duct size slips over fitting end
- inner shell fabricated
- supplied with Lindab Safe gasket on outer dimension
- “i” = Insulation thickness

Order Example RCFU # #
- Model
- ØD (in/mm)
- Ød2 (in/mm)

Order Example RCFUIM # # #
- Model
- ØD (in/mm)
- Ød2 (in/mm)
- Insulation thickness (in/mm)



Straight Tee
- single wall
- assembled with die-stamped or fabricated PSU
- supplied with Lindab Safe gasket
- L = Ød3 + 6" (Ød3 + 150 mm)
- see page 23 for 'H' dimensions



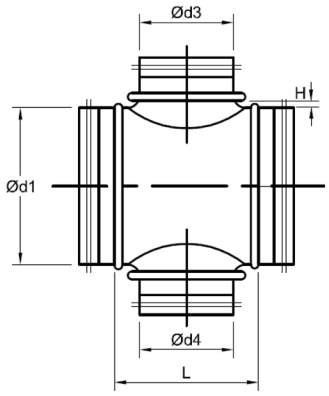
Straight Tee
- double wall/insulated
- assembled with die-stamped or fabricated PSUI
- supplied with Lindab Safe gasket on outer dimension
- L = Ød3 + 6" + 2i (Ød3 + 150 mm + 2i)
- see page 23 for 'H' dimensions
- "i" = Insulation thickness

Order Example TCPU # #
- Model
- $Ød_1$ (in/mm)
- Ød3 (in/mm)

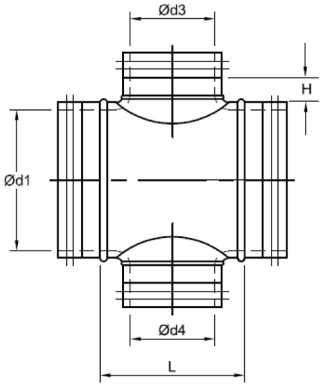
Order Example TCPUIM # # #
- Model
- $Ød_1$ (in/mm)
- Ød3 (in/mm)
- Insulation thickness (in/mm)

Crossing Tees

XCPU/XCPUIM



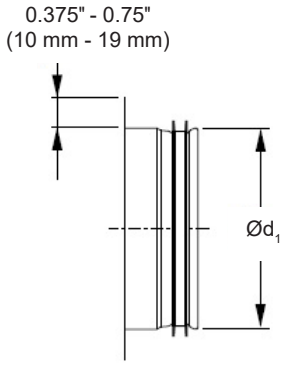
Crossing Tee
- single wall
- assembled with die-stamped or fabricated PSU's
- supplied with Lindab Safe gasket
- L = Ød3 + 6" (Ød3 + 150 mm)
- Ød3 ≥ Ød4
- see page 23 for 'H' dimensions



Crossing Tee
- double wall/insulated
- assembled with die-stamped or fabricated PSUI's
- supplied with Lindab Safe gasket on outer dimension
- L = Ød3 + 6" + 2i (Ød3 + 150 mm + 2i)
- Ød3 ≥ Ød4
- see page 23 for 'H' dimensions
- "i" = Insulation thickness

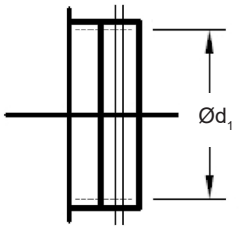
Order Example XCPU # # #
- Model
- Ød1 (in/mm)
- Ød3 (in/mm)
- Ød4 (in/mm)

Order Example XCPUIM # # # #
- Model
- Ød1 (in/mm)
- Ød3 (in/mm)
- Ød4 (in/mm)
- Insulation thickness (in/mm)



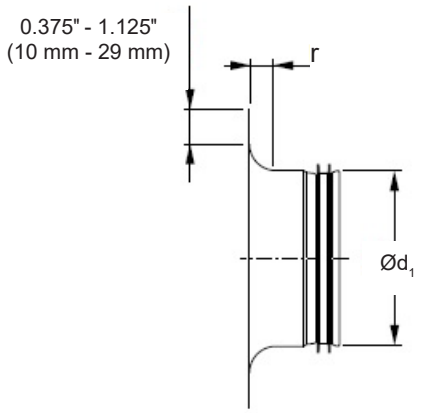
Take-off
- single wall
- starting collar
- installed on flat side of duct or plenum
- supplied with Lindab Safe gasket

Order Example ILU # #
Model
Ød1 (in/mm)



Take-off
- double wall/insulated
- starting collar
- installed on flat side of duct or plenum
- supplied with Lindab Safe gasket on outer dimension
- “i” = Insulation thickness

Order Example ILUIM # # #
Model
Ød1 (in/mm)
Insulation thickness (in/mm)

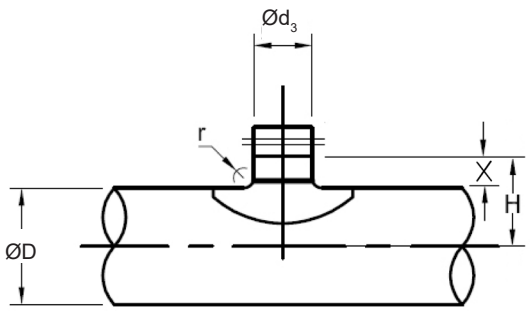


Bellmouth Take-off
- single wall
- starting collar with radius
- stamped construction
- supplied with Lindab Safe gasket
- NOTE: not available in 3", 11", 75 mm, 80 mm, and 315 mm diameters.

Order Example ILRU #
Model
$Ød_1$ (in/mm)

Saddle Taps

PSU



Saddle Tap
- single wall
- supplied with Lindab Safe gasket
- pressed:
  - radius entry
  - limited to galvanized steel only
  - available in $Ød_3$ or tap diameters 3" -12" (75 mm - 315 mm), exceptions listed on the right
  - X-dimensions listed on right
- fabricated
  - PSU-8-3, PSU-9-3, PSU-10-3, PSU-12-3 (PSU-200-75, PSU-224-75, PSU-250-75, PSU-300-75)
  - X = 1" (25 mm)

X - Dimensions		
$Ød_3$ (in/mm)	Pressed (in/mm)	Fab (in/mm)
3/75	0.375/10	1/25
4/100	0.75/20	1/25
5/125	0.75/20	1/25
6/150	1/25	1/25
7/180	1/25	1/25
8/200	1/25	1/25
9/224	1/25	1/25
10/250	1/25	1/25
12/300	1.125/29	1/25
315	n/a	1/25

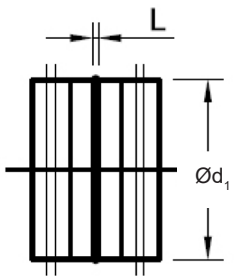
Order Example

PSU # #

Model

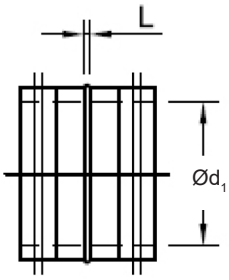
ØD (in/mm)

$Ød_3$ (in/mm)



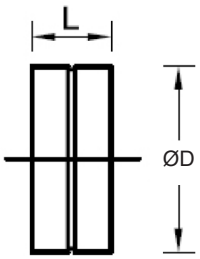
Duct Coupling
- single wall
- supplied with Lindab Safe gasket
- L = ⅜" (10 mm)

Order Example NPU #
Model
Ød1 (in/mm)



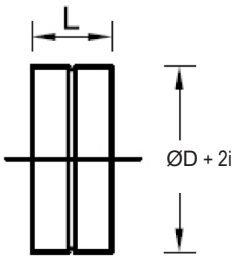
Duct Coupling
- double wall/insulated
- used for connect insulated ducts
- supplied with Lindab Safe gasket on outer dimension
- L = ⅜" (10 mm)
- "i" = Insulation thickness

Order Example NPUIM # #
Model
Ød1 (in/mm)
Insulation thickness (in/mm)



Fitting Coupling
- single wall
- used for joining single wall fittings
- supplied with Lindab Safe gasket
- ØD 3"-9" (75 mm - 224 mm), L = 3⅝" (92 mm)
  ØD 10"-12", L = 5⅛"

Order Example MF #
Model
ØD (in/mm)



Fitting Coupling
- single wall
- used for joining double wall/insulated fittings
- supplied with Lindab Safe gasket
- ØD 3"-9" (75 mm - 224 mm), L = 3⅝" (92 mm)
  ØD 10"-12" (250 mm - 315 mm), L = 5⅛" (130 mm)
- "i" = Insulation thickness

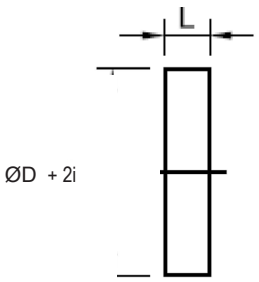
Order Example MFIM # #
Model
ØD (in/mm)
Insulation thickness (in/mm)

End Caps

EPF/EPFIM

Fitting End Cap
- single wall
- fits Lindab Safe fitting
- If ØD 3"-9" (75 mm - 224 mm), L = 1⅝" (41 mm)
  If ØD 10"-12" (250 mm - 315 mm) , L = 2⅜" (60 mm)

Order Example EPF #
Model
ØD (nom) (in/mm)

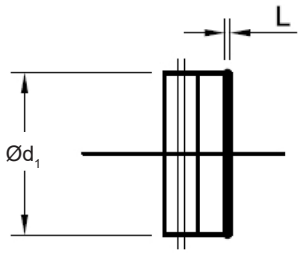


Fitting End Cap
- double wall/insulated
- fits Lindab Safe fitting
- If ØD 3"-9" (75 mm - 224 mm), L = 1⅝" (41 mm)
  If ØD 10"-12" (250 mm - 315 mm), L = 2⅜" (60 mm)
- “i” = Insulation thickness

Order Example EPFIM # #
Model
ØD (nom) (in/mm)
Insulation thickness (in/mm)

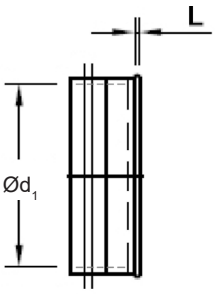
End Caps

ESU/ESUIM



Duct End Cap
- single wall
- fits ductwork
- supplied with Lindab Safe gasket
- L = ⅜" (10 mm)

Order Example ESU # #
Model
Ød1 (in/mm)

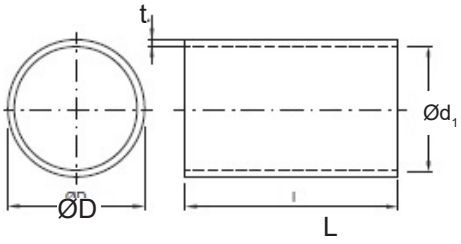


Duct End Cap
- double wall/insulated
- fits ductwork
- supplied with Lindab Safe gasket on outer dimension
- L = ⅜" (10 mm)
- "i" = Insulation thickness

Order Example ESUIM # # #
Model
Ød1 (in/mm)
Insulation thickness (in/mm)

Collar Pipe

RGN



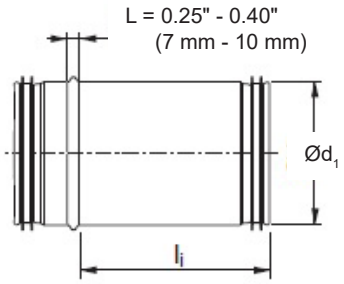
Collar Pipe
- single wall
- lead through the decks and bulkheads to connect the ducts or fittings
- Material thickness (t) shall be a minimum 3/16" (4 mm)

Ød1 nom i.d. (in/mm)	ØD (in/mm)	L (in/mm)
3/80	3.5/90	5/125
3/80	3.5/90	8/200
3/80	3.5/90	35/900
4/100	4.5/114	5/125
4/100	4.5/114	8/200
4/100	4.5/114	35/900
5/125	5.5/140	5/125
5/125	5.5/140	8/200
5/125	5.5/140	35/900
7/180	7.5/194	5/125
7/180	7.5/194	8/200
7/180	7.5/194	35/900
8/200	8.5/219	5/125
8/200	8.5/219	8/200
8/200	8.5/219	35/900
9/224	9.5/241	5/125
9/224	9.5/241	8/200
9/224	9.5/241	35/900
10/250	10.5/267	5/125
10/250	10.5/267	8/200
10/250	10.5/267	35/900

Order Example RGN # #
- Model
- Ød1 (in/mm)
- Length (L) (in/mm)

Telescopic connector

SKNPU

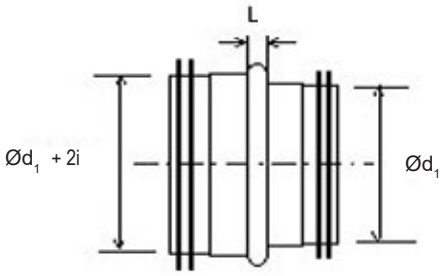


Telescopic Connector
- single wall
- used with collar pipes
- supplied with Lindab Safe gasket

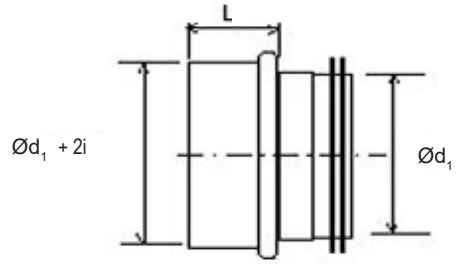
Order Example SKNPU #
Model
Ød1 (in/mm)

Insulation stop

RCKU/RCKFU



Double wall to single wall transition
- slips into double wall spiral duct
- available Ød$_1$ 3"-12" (80 mm - 315 mm)
- L = ⅛" (3 mm)
- "i" = Insulation thickness



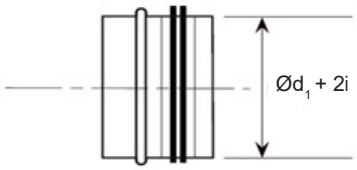
Double wall to single wall transition
- large end slips over double wall fittings
- available Ød$_1$ 3"-12" (80 mm - 315 mm)
- L = Ød$_1$ 3"-7" (80 mm - 180 mm), L = 1⅝" (41 mm)
  Ød$_1$ 8"-12" (200 mm - 315 mm), L = 2⅜" (60 mm)
- "i" = Insulation thickness

Order Example RCKU # #
- Model
- Ød$_1$ (in/mm)
- Insulation Thickness (in/mm)

Order Example RCKFU # #
- Model
- Ød$_1$ (nom) (in/mm)
- Insulation thickness (in/mm)

Field cut adaptor

FCAUI



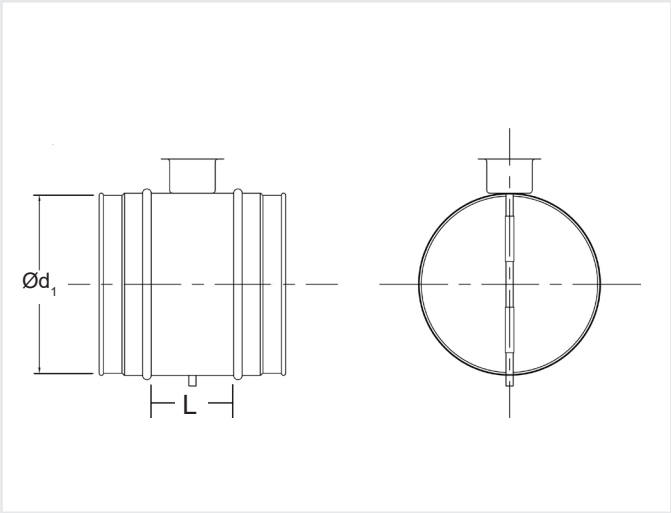
Field cut adapter
- adapter for preparing field cut double wall duct for connection to double wall fittings
- available Ød$_1$ 5"-12" (125 mm - 315 mm)
- L = Ød$_1$ 5"-7" (125 mm - 180 mm), L = 1⅝" (41 mm)
  Ød$_1$ 8"-12" (200 mm - 315 mm), L = 2⅜" (60 mm)
- “i” = Insulation thickness

Order Example FCAUI # #

Model

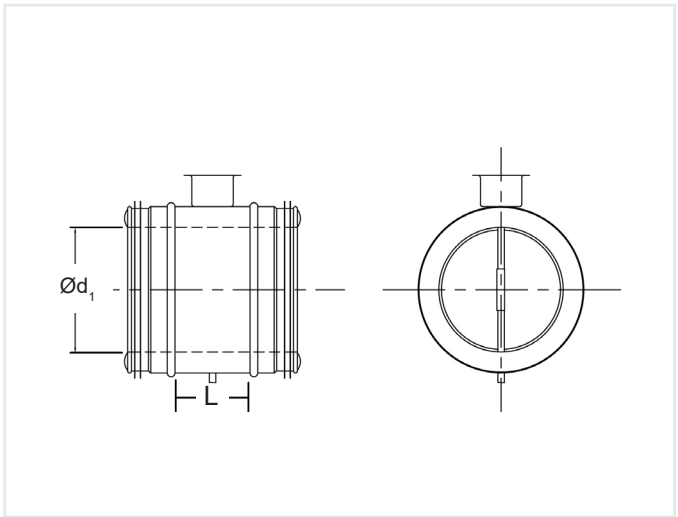
Ød$_1$ (in/mm)

Insulation thickness (in/mm)



Balancing Damper
- single wall
- has a turning, circular blade
- used when complete shut-off is not required
- supplied with Lindab Safe gasket
- cup height = 1.8" (46 mm)
- blade can be adjusted in a 0°-90°angle
- L = $Ød_1$ 4"-9" (80 mm - 230 mm), L = 3.9" (100 mm)
  $Ød_1$ 10"-12" (250 mm - 315 mm), L = 3.5" (90 mm)
- available in $Ød_1$ 4"-12" (100 mm – 315 mm)

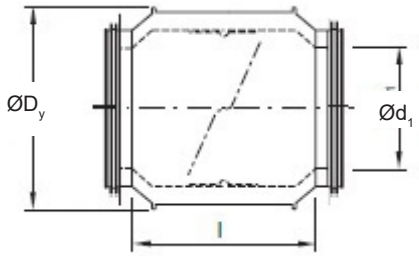
Order Example DSU #
Model
$Ød_1$ (in/mm)



Balancing Damper
- double wall/insulated
- has a turning, circular blade
- used when complete shut-off is not required
- supplied with Lindab Safe gasket on outer dimension
- cup height = 1.8" (46 mm)
- blade can be adjusted in a 0°-90°angle
- L = $Ød_1$ 4"-9" (80 mm - 230 mm), L = 3.9" (100 mm)
  $Ød_1$ 10"-12" (250 mm - 315 mm), L = 3.5" (90 mm)
- available in $Ød_1$ 4"-12" (100 mm – 315 mm)
- "i" = Insulation thickness

Order Example DSUIM # #
Model
$Ød_1$ (in/mm)
Insulation thickness (in/mm)

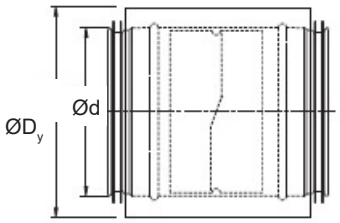
Dampers, non-return RKUIM/DOSUIM



Non-return Valve
- double wall/insulated
- one-way dampers are used to prevent natural back-flows
- supplied with Lindab Safe gasket on outer dimension
- L = 4" (100 mm)
- "i" = Insulation thickness

Ød1 nom (in/mm)	ØDy nom (in/mm)
3/80	5.5/140
4/100	6.5/165
5/125	7.9/200
6/160	9.4/240
7/180	9.4/240
8/200	11.4/290
9/224	11.4/290
10/250	14.4/365

Order Example RKUIM # #
- Model
- Ød1 (in/mm)
- Insulation thickness (in/mm)

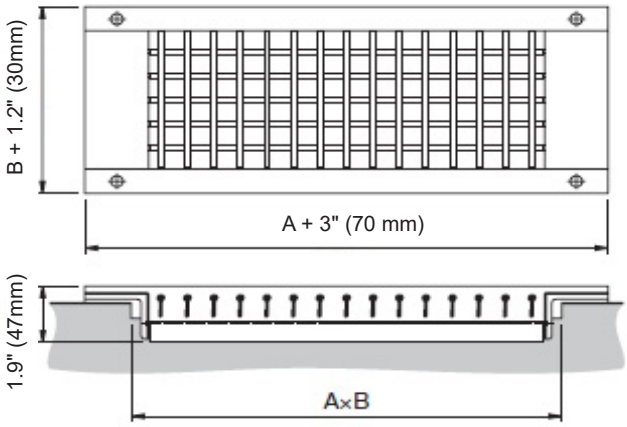


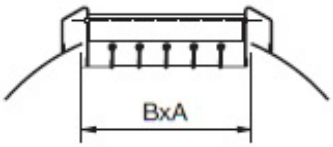
Non-return Valve
- double wall/insulated
- one-way dampers are used to prevent natural back-flows
- can be mounted both vertically and horizontally
- supplied with Lindab Safe gasket on outer dimension
- "i" = Insulation thickness

DOSUIM # #
- Model
- Ød (in/mm)
- Insulation thickness (in/mm)

Registers

RGS-3





Supply/Return Register
- adjustable double deflection blades
- volume damper designed specifically for direct mounting on spiral duct
- rectangular register taps are not required

The register is designed in such a way that the flanges always meet flush to the duct regardless of the duct diameter. The RGS-3 comes equipped with gasketing material around the neck of the register. This prevents air leakage.

Materials and finish

Register: galvanized sheet steel
Damper: electro-galvanized sheet steel

Register Nom AxB (inch)	Register Nom AxB (mm)	Min. duct diameter (in/mm)	Free area (ft^2)	Free area (m^2)
13 x 3	325 x 75	6/160	0.18	0.017
17 x 3	425 x 75	6/160	0.25	0.023
21 x 3	525 x 75	6/160	0.30	0.028
25 x 3	625 x 75	6/160	0.36	0.034
33 x 3	825 x 75	6/160	0.48	0.045
41 x 3	1025 x 75	8/200	0.60	0.056
49 x 3	1225 x 75	8/200	0.73	0.068
13 x 6	325 x 150	12/315	0.36	0.034
17 x 6	425 x 150	12/315	0.48	0.045
21 x 6	525 x 150	12/315	0.60	0.056
25 x 6	625 x 150	12/315	0.73	0.068
33 x 6	825 x 150	12/315	1.00	0.093
41 x 6	1025 x 150	12/315	1.20	0.113

Order Example

RGS # #
Model
Length A (in/mm)
Width B (in/mm)

SELECTION CHART SUPPLY AND RETURN

Core velocity (fpm)			300	400	500	600	700	800	1000	1200
Velocity Pressure			0.006	0.010	0.016	0.023	0.031	0.040	0.063	0.090
Total Pressure		0°	0.011	0.019	0.028	0.039	0.052	0.067	0.101	0.141
		22.5°	0.012	0.021	0.032	0.044	0.059	0.075	0.114	0.159
Size		45°	0.019	0.033	0.049	0.069	0.092	0.117	0.177	0.248
A_c 0.18 (ft^2)	cfm		54	72	90	108	126	144	180	216
13 x 3	NC	0°	-	-	-	14	20	25	33	40
	Throw ft	0°	3 4 7	6 7 12	8 9 18	10 12 23	12 14 27	14 17 32	17 21 40	19 25 47
		22.5°	3 2 5	5 5 10	6 7 14	8 10 18	10 11 22	11 13 25	13 17 32	15 20 37
		45°	2 2 3	3 3 6	4 5 9	5 6 11	6 7 14	7 8 16	8 10 20	9 12 23
A_c 0.24 (ft^2)	cfm		72	96	120	144	168	192	240	288
17 x 3	NC	0°	-	-	12	18	24	29	37	44
	Throw ft	0°	3 5 9	6 8 15	8 11 20	10 13 25	12 16 30	14 18 34	17 22 42	19 26 49
		22.5°	3 4 7	5 6 12	7 8 16	8 11 20	10 13 24	11 14 27	14 18 34	15 21 39
		45°	2 2 5	3 4 7	4 5 10	5 7 13	6 8 15	7 9 17	8 11 21	10 13 25
A_c 0.30 (ft^2)	cfm		90	120	150	180	210	240	300	360
21 x 3	NC	0°	-	-	14	21	26	31	39	46
	Throw ft	0°	3 6 11	6 9 17	8 12 22	11 14 27	12 17 32	14 19 36	17 23 44	19 27 51
		22.5°	3 5 9	5 7 13	7 9 17	8 11 21	10 13 25	11 15 29	14 18 35	15 21 41
		45°	2 3 6	3 4 8	4 6 11	5 7 13	6 8 16	7 9 18	9 12 22	10 13 25
A_c 0.36 (ft^2)	cfm		108	144	180	216	252	288	360	432
25 x 3,	NC	0°	-	-	14	21	26	31	39	46
13 x 6	Throw ft	0°	4 7 13	6 10 19	9 13 24	11 15 29	13 18 33	14 20 38	17 24 46	19 28 53
		22.5°	3 5 10	5 8 15	7 10 19	9 12 23	10 14 27	12 16 30	14 19 37	16 22 42
		45°	2 3 6	3 5 9	4 6 12	5 8 14	6 9 17	7 10 19	9 12 23	10 14 26
A_c 0.48 (ft^2)	cfm		144	192	240	288	336	384	480	576
33 x 3,	NC	0°	-	12	20	27	32	37	45	52
17 x 6	Throw ft	0°	4 9 16	7 12 22	9 14 27	11 17 32	13 19 37	15 22 41	18 26 49	20 30 56
		22.5°	3 7 13	5 9 17	7 11 22	9 14 26	10 15 29	12 17 33	14 21 39	16 24 45
		45°	2 4 8	3 6 11	4 7 14	6 8 16	7 10 18	7 11 21	9 13 25	10 15 28
A_c 0.60 (ft^2)	cfm		180	240	300	360	420	480	600	720
41 x 3,	NC	0°	-	15	23	29	35	40	48	54
21 x 6,	Throw ft	0°	4 10 19	7 13 25	9 16 30	12 18 35	13 21 40	15 23 44	18 27 52	20 31 59
13 x 9		22.5°	4 8 15	6 10 20	8 13 24	9 15 28	11 17 32	12 19 35	14 22 42	16 25 47
		45°	2 5 10	4 6 12	5 8 15	6 9 17	7 10 20	8 12 22	9 14 26	10 16 29
A_c 0.73 (ft^2)	cfm		219	292	365	438	511	584	730	876
49 x 3,	NC	0°	-	15	23	29	35	40	48	54
25 x 6	Throw ft	0°	4 10 19	7 13 25	9 16 30	12 18 35	13 21 40	15 23 44	18 27 52	20 31 59
		22.5°	4 8 15	6 10 20	8 13 24	9 15 28	11 17 32	12 19 35	14 22 42	16 25 47
		45°	2 5 10	4 6 12	5 8 15	6 9 17	7 10 20	8 12 22	9 14 26	10 16 29
A_c 0.80 (ft^2)	cfm		240	320	400	480	560	640	800	960
17 x 9	NC	0°	-	18	26	33	38	43	51	58
	Throw ft	0°	5 12 22	8 15 28	10 17 3	12 20 38	14 23 43	16 25 47	19 29 55	21 33 62
		22.5°	4 9 18	6 12 22	8 14 27	10 16 31	11 18 34	13 20 38	15 23 44	17 26 50
		45°	3 6 11	4 7 14	5 9 17	6 10 19	7 11 21	8 12 24	9 15 8	10 16 31

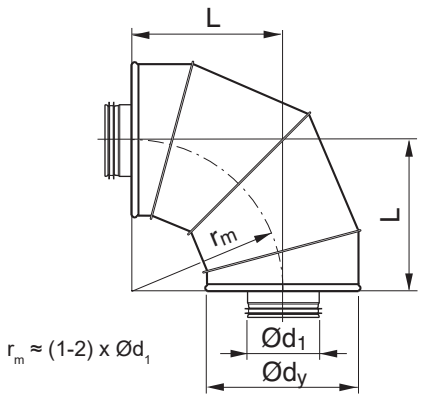
SELECTION CHART SUPPLY AND RETURN

Core velocity (fpm)			300	400	500	600	700	800	1000	1200
Velocity Pressure			0.006	0.010	0.016	0.023	0.031	0.040	0.063	0.090
Total Pressure		0°	0.011	0.019	0.028	0.039	0.052	0.067	0.101	0.141
		22.5°	0.012	0.021	0.032	0.044	0.059	0.075	0.114	0.159
Size		45°	0.019	0.033	0.049	0.069	0.092	0.117	0.177	0.248
A_c 1.00 (ft^2)	cfm		300	400	500	600	700	800	1000	1200
33 x 6,	NC	0°	10	21	29	35	41	46	54	61
21 x 9	Throw ft	0°	6 13 24	8 16 30	11 18 35	13 21 40	15 23 44	16 26 49	19 30 57	21 34 64
		22.5°	5 10 19	7 12 24	9 15 28	10 17 32	12 19 36	13 21 39	15 24 45	17 27 51
		45°	3 6 12	4 8 15	5 9 17	6 10 20	7 12 22	8 13 24	10 15 28	11 17 32
A_c 1.20 (ft^2)	cfm		360	480	600	720	840	960	1200	1440
41 x 6,	NC	0°	13	23	31	38	43	48	56	63
25 x 9	Throw ft	0°	6 13 24	9 16 30	11 18 35	13 21 40	15 23 44	17 26 49	20 30 57	22 34 64
		22.5°	5 10 19	7 12 24	9 15 28	11 17 32	12 19 36	14 21 39	12 24 45	18 27 51
		45°	3 6 12	4 8 15	6 9 17	7 10 20	8 12 22	9 13 24	10 15 28	11 17 32
A_c 1.46 (ft^2)	cfm		438	584	730	876	1022	1168	1460	1752
49 x 6	NC	0°	15	25	33	40	46	50	59	65
	Throw ft	0°	7 11 21	10 14 27	12 17 32	14 20 37	16 22 42	18 24 46	21 29 54	23 32 61
		22.5°	6 9 17	8 11 22	10 14 26	11 16 30	13 18 34	14 20 37	17 23 43	18 26 49
		45°	4 6 11	5 7 14	6 8 16	7 10 19	8 11 21	9 12 23	10 14 27	11 16 31
A_c 1.60 (ft^2)	cfm		480	640	800	960	1120	1280	1600	1920
33 x 9	NC	0°	16	26	35	41	47	52	60	66
	Throw ft	0°	8 10 19	10 13 25	13 16 30	15 18 35	17 21 39	18 23 44	21 27 52	23 31 59
		22.5°	6 8 15	8 10 20	10 13 24	12 15 28	13 17 32	15 18 35	17 22 41	19 25 47
		45°	4 5 9	5 6 12	6 8 15	7 9 17	8 10 2	9 12 22	11 14 26	12 15 29
A_c 2.00 (ft^2)	cfm		600	800	1000	1200	1400	1600	2000	2400
41 x 9	NC	0°	19	29	37	44	49	54	62	69
	Throw ft	0°	9 12 22	12 15 28	14 18 34	16 21 40	18 23 44	20 26 49	23 29 56	25 32 61
		22.5°	7 9 18	9 12 23	11 14 27	13 17 32	14 19 35	16 2039	18 2345	20 26 49
		45°	4 6 11	6 7 14	7 9 17	8 10 20	9 12 22	10 13 24	11 15 28	12 16 30
A_c 2.41 (ft^2)	cfm		723	964	1205	1446	1687	1928	2410	2892
49 x 9	NC	0°	21	31	40	46	52	57	65	71
	Throw ft	0°	10 13 5	13 17 32	15 20 38	17 23 43	19 25 48	21 27 52	24 31 59	26 34 64
		22.5°	8 11 20	10 13 25	12 16 30	14 18 34	15 20 38	17 22 41	19 25 47	21 27 51
		45°	5 7 13	6 8 16	8 10 19	9 11 21	10 13 24	10 14 26	12 16 29	13 17 32

Order Example

Elbow Silencers

BSLGUM



Elbow silencer

- for use in duct systems with space considerations
- made of 2 gored elbows.
- inner elbow is made of perforated steel sheet
- filled with acoustical absorption material
- includes fiber retention system between the perforated inner shell and the glass fiber material in order to prevent erosion of acoustical absorption material into the airstream
- supplied with Lindab Safe® gasket
- L = $Ød_1$ + (2 x i)
- $Ød_y$ = $Ød_1$ + (2 x i)
- choose insulation thickness by model number
  - BSLGUM2 = 2" (50 mm)
  - BSLGUM4 = 4" (100 mm)
- diameters 4" through 12" (100 mm - 315 mm)
- “i” = Insulation thickness

Order Example

BSLGUM4 # #

Model

$Ød_1$ (in/mm)

Insulation thickness (in/mm)

Elbow Silencers BSLGUM

Acoustical Performance – Net Insertion Loss

Octave band		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Frequency (Hz)		63	125	250	500	1K	2K	4K	8K	63	125	250	500	1K	2K	4K	8K
$Ød_1$ (in)	Velocity (fpm)	Net Insertion Loss (Decibels)								Net Insertion Loss (Decibels)							
		BSLGU 02								BSLGU 04							
3	-6000	8	7	16	27	31	37	32	24	11	17	27	35	34	44	38	27
	-4000	6	7	16	26	30	38	32	24	10	16	27	35	34	44	38	28
	-2000	7	5	15	26	29	36	32	25	11	15	26	34	34	43	38	28
	0	6	6	14	25	28	36	31	25	10	14	26	33	33	43	38	28
	+2000	6	6	13	24	27	35	30	25	11	12	25	32	34	42	36	29
	+4000	8	5	13	23	26	34	29	24	11	13	24	31	33	41	36	30
	+6000	8	5	12	22	25	33	28	24	11	12	22	30	32	40	36	32
4	-6000	7	6	15	27	31	36	31	23	10	16	27	34	35	43	36	26
	-4000	6	6	15	26	30	36	31	23	10	15	27	34	35	43	36	27
	-2000	6	5	14	25	29	35	31	24	10	14	26	33	35	42	36	27
	0	5	5	13	24	28	35	30	24	9	13	25	32	34	42	36	27
	+2000	6	5	12	23	27	34	29	24	10	12	24	31	34	41	35	28
	+4000	7	4	12	22	26	33	28	23	10	12	23	30	33	40	35	29
	+6000	7	4	11	21	25	32	27	23	10	11	21	29	32	39	35	30
5	-6000	6	6	15	27	32	35	30	22	10	16	27	34	36	42	35	26
	-4000	6	6	15	26	31	35	30	22	10	15	27	34	36	42	35	27
	-2000	6	5	14	25	30	34	30	23	10	14	26	33	36	41	35	27
	0	5	5	13	24	29	34	29	23	8	13	25	32	35	41	34	26
	+2000	6	5	12	23	28	33	28	23	10	12	24	31	35	40	34	27
	+4000	7	4	11	21	26	32	27	22	10	12	22	30	33	39	34	28
	+6000	7	4	11	20	25	31	26	22	10	11	21	29	32	38	34	29
6	-6000	5	5	14	27	32	34	29	21	9	15	27	33	37	41	33	25
	-4000	6	5	14	26	31	33	29	21	10	14	27	33	37	41	33	26
	-2000	5	5	13	24	30	33	29	22	9	13	26	32	37	40	33	26
	0	4	4	12	23	29	33	28	22	7	12	24	31	36	40	32	25
	+2000	6	4	11	22	28	32	27	22	9	12	23	30	35	39	33	26
	+4000	6	3	10	20	26	31	26	21	9	11	21	29	33	38	33	27
	+6000	6	3	10	19	25	30	25	21	9	10	20	28	32	37	33	27
7	-4000	5	5	14	26	33	33	28	20	9	15	27	33	38	41	32	24
	-3000	6	5	13	25	32	32	28	20	9	14	27	33	38	41	32	25
	-2000	5	5	12	24	31	32	28	21	9	13	26	32	38	40	32	25
	0	4	4	12	23	30	32	27	21	7	12	24	31	37	39	31	24
	+2000	6	4	11	22	29	31	26	21	9	12	23	30	36	39	32	25
	+3000	6	3	10	20	27	30	25	20	9	11	21	28	35	38	32	26
	+4000	6	3	10	19	26	29	24	20	9	10	20	28	34	37	32	26
8	-5000	5	5	13	24	33	31	26	19	8	14	26	32	39	40	31	23
	-4000	5	4	12	24	33	30	26	19	8	13	26	32	39	40	31	23
	-2000	5	4	11	23	32	30	26	20	8	12	25	31	38	39	31	24
	0	4	4	11	23	31	30	26	20	7	11	24	30	37	38	30	23
	+2000	5	4	10	22	30	30	25	20	8	11	23	29	37	38	30	23
	+4000	5	3	10	20	27	29	24	19	8	10	20	27	36	37	30	24

Acoustical Performance – Net Insertion Loss

Octave band		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Frequency (Hz)		63	125	250	500	1K	2K	4K	8K	63	125	250	500	1K	2K	4K	8K
$Ød_1$ (in)	Velocity (fpm)	Net Insertion Loss (Decibels)								Net Insertion Loss (Decibels)							
	+5000	5	3	10	19	27	28	23	19	8	10	20	27	35	36	30	24
		BSLGU 02								BSLGU 04							
9	-4000	5	5	13	24	29	29	24	18	8	14	26	32	40	39	30	22
	-3000	5	4	12	24	33	29	25	19	8	13	26	32	40	39	30	22
	-2000	5	4	11	23	33	29	25	19	8	12	25	31	39	38	30	23
	0	4	4	11	23	32	29	25	19	7	11	24	30	38	37	29	22
	+2000	5	4	10	22	31	29	24	19	8	11	23	29	38	37	29	22
	+3000	5	3	10	20	29	28	23	18	8	10	21	27	37	37	29	23
	+4000	5	3	10	20	28	27	22	18	8	10	20	27	36	36	29	23
10	-4000	4	5	12	24	24	27	22	17	7	13	26	31	41	38	28	21
	-3000	4	4	11	24	33	27	23	18	7	13	25	31	41	38	28	21
	-2000	4	4	10	23	33	27	23	18	7	12	24	30	40	37	28	21
	0	3	4	10	22	32	27	23	18	6	11	23	29	39	36	28	21
	+2000	4	4	10	21	31	27	23	18	7	11	22	28	38	36	28	21
	+3000	4	3	9	20	30	27	22	17	7	10	21	27	38	36	28	21
	+4000	4	3	9	20	29	26	21	17	7	10	20	27	37	35	28	21
12	-4000	3	5	11	24	34	25	19	15	6	12	25	30	42	36	25	19
	-3000	2	4	10	23	34	25	19	16	7	11	25	30	42	36	26	20
	-2000	3	4	10	23	34	25	20	16	7	11	24	30	42	35	26	19
	0	2	4	9	22	33	24	20	16	5	10	23	28	41	35	26	19
	+2000	2	4	9	22	33	24	20	16	6	10	22	27	40	34	26	19
	+3000	2	3	8	20	31	24	19	14	6	10	21	26	40	34	26	18
	+4000	2	3	8	20	31	24	19	14	5	9	21	26	40	34	26	18

Notes:

1. Net insertion loss, self-generated noise and pressure drop data were obtained through tests conducted by an independent testing laboratory in accordance with ASTM Standard E477-96, entitled "Standard Method of Testing Duct Liner Materials and Prefabricated Silencers for Acoustical and Airflow Performance." Test specimens whose inside diameters correspond to 6", 12", 18", 24", 30", 36", and 42" and whose lengths correspond to the minimum and maximum lengths catalogued were tested and reported. All data presented for other diameters and lengths were interpolated or extrapolated.

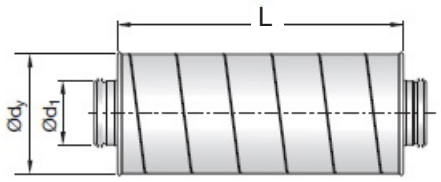
2. Velocity, indicated as fpm, is determined by dividing the air flow through the silencer (ft^3/min) by the cross sectional area of the silencer face (ft^2) calculated using the silencer clear inside diameter. Return/exhaust air is indicated as (-)fpm and supply air is indicated as (+)fpm. 0 fpm is the "no flow" condition.

3. The pressure drop performance data obtained from ASTM E477-96 "Standard Method of Testing Duct Liner Materials and Prefabricated Silencers for Acoustical and Airflow Performance" are tested at simulated ideal ducted inlet and ducted outlet conditions. Any deviations from these ideal conditions on actual silencer installations should be accounted for in the form of additional pressure loss.

4. The self-generated noise for elbow silencers and straight silencers without a baffle is too low to be measured by ASTM E477-96. The measurements obtained for these silencers are equal to or less than the corresponding single wall duct reference condition or within +/- 10dB per ASTM E477-96 section 9.1.2.

Straight Silencers

SLGUM2



Straight silencer

- straight through silencer with no obstructions to air flow
- supplied with Lindab Safe® gasket
- filled with acoustical absorption material
- includes fiber retention system between the perforated inner shell and the glass fiber material in order to prevent erosion of acoustical absorption material into the airstream
- lengths in encrements of 12" (305 mm), up to 96" (2450 mm) long
- insulation thickness is 2" (150 mm) standard
- additional thicknesses available upon request
- “i” = Insulation thickness

Order Example

SLGUM2 # # #

- Model
- Ød$_1$ nom (in/mm)
- Length (L) (in/mm)
- Insulation thickness (in/mm)

Straight Silencers

SLGUM2

Acoustical Performance – Net Insertion Loss

Octave band		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Frequency (Hz)		63	125	250	500	1K	2K	4K	8K	63	125	250	500	1K	2K	4K	8K	63	125	250	500	1K	2K	4K	8K
$Ød_1$ (in)	Velocity (fpm)	Net Insertion Loss (Decibels)								Net Insertion Loss (Decibels)								Net Insertion Loss (Decibels)							
L (in)		12								24								36							
3	-6000	7	8	12	17	19	26	22	19	9	13	21	29	33	39	32	23	10	18	29	41	46	51	42	27
	-4000	6	7	12	16	18	25	22	19	8	12	20	28	32	38	32	24	10	17	27	40	45	51	42	29
	-2000	6	7	11	16	18	25	22	20	8	12	18	27	32	38	33	26	10	16	25	38	45	51	43	31
	0	6	7	10	15	17	25	22	20	8	11	17	26	30	38	33	27	9	15	23	37	42	50	43	33
	+2000	5	7	10	15	17	24	22	20	7	11	16	26	29	35	32	27	9	14	21	36	40	45	42	33
	+4000	4	6	10	15	16	24	21	18	6	10	15	25	28	34	32	26	8	13	19	35	39	44	42	33
	+6000	3	5	10	14	16	24	20	17	6	9	14	24	27	33	30	25	8	12	18	34	37	42	40	33
4	-6000	6	7	11	15	17	23	19	16	8	12	19	27	30	34	28	21	9	17	27	39	43	45	37	24
	-4000	5	6	11	14	16	22	19	16	8	11	18	26	30	34	28	22	9	16	25	38	42	45	37	26
	-2000	5	6	10	14	16	22	19	17	7	10	17	26	29	34	28	23	9	15	23	36	42	45	38	28
	0	5	6	9	13	15	22	19	17	7	10	15	25	28	33	28	24	8	14	21	35	40	45	38	30
	+2000	4	6	9	13	14	21	19	17	6	9	15	25	27	32	28	24	7	13	20	34	38	43	37	30
	+4000	4	5	9	13	14	21	19	16	6	9	14	24	26	31	28	24	7	12	18	33	37	42	37	30
	+6000	3	5	9	13	14	21	19	15	5	8	13	23	25	30	28	24	6	11	17	32	35	40	36	30
5	-6000	5	6	10	13	15	20	16	13	7	11	18	25	28	29	24	17	8	16	26	37	41	39	32	21
	-4000	4	5	10	13	14	19	17	13	6	10	17	24	27	31	25	18	8	15	24	36	40	43	33	23
	-2000	4	5	9	12	14	19	17	14	6	9	15	23	26	31	25	19	7	14	22	34	39	43	34	25
	0	4	5	8	12	13	19	17	14	6	9	14	22	25	31	25	20	7	13	20	33	38	43	34	27
	+2000	4	5	8	11	12	18	17	14	5	8	13	22	24	30	25	20	6	12	19	32	36	42	33	27
	+4000	3	4	8	11	12	18	16	13	4	8	12	21	23	29	25	20	6	11	17	31	35	40	33	27
	+6000	2	4	7	11	12	18	16	12	3	7	12	20	22	27	24	19	5	10	17	29	33	36	32	27
6	-6000	4	5	8	11	13	17	13	10	6	10	16	23	26	25	20	14	7	15	24	35	38	32	26	17
	-4000	3	4	8	11	12	16	14	10	5	9	15	23	25	29	22	15	6	13	22	34	38	41	29	19
	-2000	3	4	7	10	11	16	14	10	4	8	14	21	24	29	22	16	5	12	21	32	36	41	29	21
	0	3	4	7	10	11	15	14	11	5	8	13	21	23	28	22	17	6	12	19	31	35	41	30	23
	+2000	3	3	6	9	10	15	14	11	4	7	12	20	22	28	22	17	5	11	18	30	33	40	29	23
	+4000	2	3	6	9	10	15	13	10	3	7	11	19	21	27	21	17	4	10	16	29	32	38	29	23
	+6000	1	3	5	8	9	15	13	9	2	6	11	17	20	24	20	16	3	9	16	26	30	32	27	23
L (in)		24								36								48							
7	-4000	4	9	15	21	24	27	20	14	5	13	21	31	36	37	27	19	6	16	28	41	47	47	33	23
	-3000	4	9	14	21	23	27	20	15	5	12	21	30	35	37	27	19	6	16	28	40	46	47	33	24
	-2000	4	9	13	20	23	27	20	15	5	12	20	30	34	37	27	20	6	15	27	39	45	47	33	25
	0	4	8	13	19	22	27	21	16	5	11	19	29	33	37	28	22	6	15	25	38	44	47	35	27
	+2000	4	7	12	18	21	26	20	16	4	10	18	28	31	36	27	22	5	14	24	37	42	45	33	27
	+3000	3	6	11	17	20	25	19	16	4	9	17	26	30	33	26	22	4	13	23	35	40	42	32	28
	+4000	2	6	11	17	19	23	19	15	3	9	16	25	29	31	25	22	4	12	22	34	38	38	32	28
8	-4000	4	9	14	20	23	25	18	14	5	12	21	29	33	33	24	18	5	15	27	37	43	41	30	22
	-3000	4	9	13	20	23	25	18	14	5	12	20	28	33	33	24	19	5	14	26	36	42	40	30	23
	-2000	3	9	12	19	22	25	19	15	4	12	19	27	32	33	25	20	5	14	26	35	41	40	30	24
	0	3	8	12	18	21	25	19	15	4	11	19	26	31	33	25	20	4	13	25	34	40	40	31	25
	+2000	3	7	12	17	20	24	18	15	4	10	18	26	30	31	24	20	4	12	24	34	39	38	30	25
	+3000	2	6	12	16	20	24	18	14	3	9	18	25	29	30	24	20	3	11	23	33	37	36	30	25
	+4000	2	5	11	16	19	23	18	14	3	8	17	24	27	29	24	20	3	11	22	32	35	35	29	26

Straight Silencers SLGUM2

Acoustical Performance – Net Insertion Loss

Octave band		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Frequency (Hz)		63	125	250	500	1K	2K	4K	8K	63	125	250	500	1K	2K	4K	8K	63	125	250	500	1K	2K	4K	8K
$Ød_1$ (in)	Velocity (fpm)	Net Insertion Loss (Decibels)								Net Insertion Loss (Decibels)								Net Insertion Loss (Decibels)							
L (in)		12								24								36							
9	-4000	4	8	14	18	23	23	16	13	4	11	20	26	31	30	22	16	4	13	26	34	40	37	27	20
	-3000	4	8	13	18	23	23	16	13	4	10	19	25	31	30	22	16	4	13	25	33	40	37	27	20
	-2000	3	8	12	17	21	23	17	13	3	10	18	25	30	30	22	17	4	13	25	32	39	37	28	21
	0	3	7	12	16	20	23	17	14	3	9	18	24	29	30	23	18	3	12	24	32	38	37	28	22
	+2000	3	7	12	16	19	23	16	14	3	9	17	23	28	29	22	18	3	11	23	31	37	36	27	23
	+3000	2	6	12	15	19	22	16	13	2	8	17	22	27	28	22	18	2	10	22	30	36	34	27	23
	+4000	2	5	11	15	18	22	16	13	2	7	16	22	26	28	21	18	2	10	21	30	34	34	26	23
10	-4000	3	7	13	16	22	21	14	11	3	9	19	24	30	27	19	14	3	11	24	31	37	33	24	17
	-3000	3	7	12	15	22	21	14	11	3	9	18	23	30	27	19	14	3	11	24	30	37	33	24	17
	-2000	2	7	12	15	20	21	14	11	3	9	18	22	28	27	20	15	3	11	23	29	36	33	25	18
	0	2	6	11	14	19	21	15	12	2	8	17	22	28	27	20	16	2	10	23	29	36	33	25	19
	+2000	2	6	11	14	18	21	14	12	2	8	17	21	27	27	19	16	2	9	22	28	35	33	24	20
	+3000	1	5	11	13	18	20	14	11	1	7	16	20	26	26	19	16	1	9	21	27	34	32	24	20
	+4000	1	5	10	13	17	20	14	11	1	7	15	20	25	26	19	16	1	8	20	27	33	32	23	20
12	-4000	0	4	12	12	19	16	11	8	0	6	18	19	26	21	14	10	0	8	23	25	33	26	16	12
	-3000	0	4	11	12	18	16	11	8	0	6	17	18	26	22	14	11	0	8	22	24	33	27	17	13
	-2000	0	4	11	12	18	16	12	9	0	6	17	18	25	22	15	11	0	8	22	24	32	27	18	13
	0	0	4	10	11	17	17	12	9	0	6	16	17	25	22	16	12	0	7	21	23	32	27	19	15
	+2000	0	4	10	11	17	17	12	9	0	6	15	17	24	23	15	12	0	7	20	22	31	28	18	15
	+3000	0	3	10	11	17	16	11	8	0	5	15	17	24	22	15	12	0	7	19	22	30	28	18	15
	+4000	0	3	9	10	16	16	11	8	0	5	14	16	23	22	15	12	0	7	18	21	30	28	18	15

Correction Factors for Silencer Lengths Other Than 5'-0" (L)						
Silencer Diameter	Length					
	2'-0"	3'-0"	4'-0"	6'-0"	7'-0"	8'-0"
12"	0.64	0.72	0.86	N/A	N/A	N/A

N/A = Silencer not available in the indicated length

Notes:

1. Net insertion loss, self-generated noise and pressure drop data were obtained through tests conducted by an independent testing laboratory in accordance with ASTM Standard E477-96, entitled "Standard Method of Testing Duct Liner Materials and Prefabricated Silencers for Acoustical and Airflow Performance." Test specimens whose inside diameters correspond to 6" and 12" and whose lengths correspond to the minimum and maximum lengths catalogued were tested and reported. All data presented for other diameters and lengths were interpolated or extrapolated.

2. The pressure drop performance data obtained from ASTM E477-96 "Standard Method of Testing Duct Liner Materials and Prefabricated Silencers for Acoustical and Airflow Performance" are tested at simulated ideal ducted inlet and ducted outlet conditions. Any deviations from these ideal conditions on actual silencer installations should be accounted for in the form of additional pressure loss.

3. The self-generated noise for elbow silencers and straight silencers without a baffle is too low to be measured by ASTM E477-96. The measurements obtained for these silencers are equal to or less than the corresponding single wall duct reference condition or within +/- 10dB per ASTM E477-96 section 9.1.2.

Linx Industries, Inc.
2600 Airline Boulevard
Portsmouth, Virginia 23701
Phone: 800.797.7476
Fax: 757.488.4502
www.li-hvac.com

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