



Sara International Factory
For Air Conditioning Duct
ISO: 9001:2015



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SARA INTERNATIONAL FACTORY FOR AIR CONDITIONING DUCT ISO: 9001-2015



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1. GI – Galvanized Steel
2. SS – Stainless Steel
3. Aluminum Ducts & Cladding Work
4. Black Mild Steel Duct Works.

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RECTANGULAR DUCTS & FITTINGS

Sara International Factory
For Air Conditioning Duct

AN ISO 9001: 2015 CERTIFIED COMPANY



STRAIGHT DUCTS

SRD



Description

SARA'S single wall rectangular duct and fittings will be Pittsburgh-lock longitudinal seam construction, with duct provide in standard normal 1.2m lengths. Standard construction will conform with the 2005 SMACNA HVAC Duct Construction standards.

Connectors will be:-

- Side on flange
- S&C Drive slip
- Raw Ends
- Angle flange connector

Duct and fittings will be fabricated from:-

- Galvanized steel – ASTM A653 –G90 (GSM 275)
- Black steel (with various paints) ASTM-A366/A619
- Stainless steel ASTM A240/480
- Aluminum – ASTM B 209- Type alloy 3003-H14

SARA'S rectangular duct is constructed with strengthening beads around the parameter.

- Ducts can be supplied fully assembled, L-Shape, or wrap around
- Fittings can be supplied either fully assembled or knocked down

Ordering

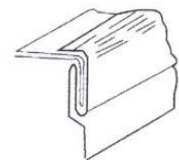
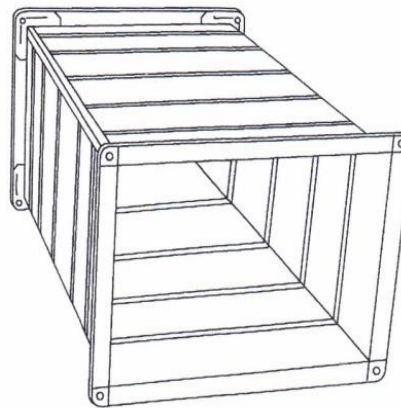
Product code:

RDS aaa bbb ccc

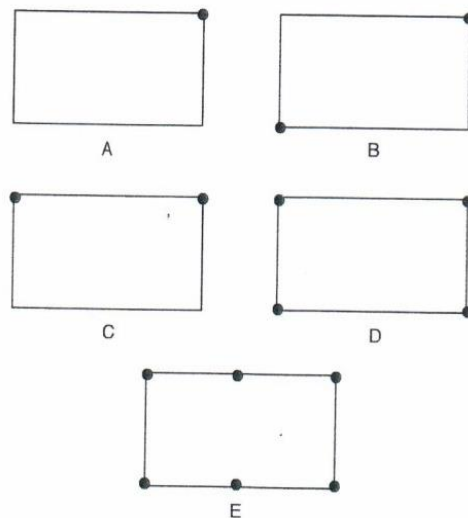
Type	_____
W mm	_____
H mm	_____
L mm	_____

Dimensions

Pittsburgh Lock



Seam Location



Seam Location

Seam numbers and location vary according to joint type and size.

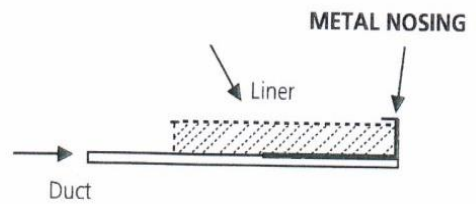
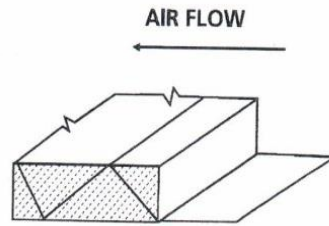


LINED DUCTS



LDS

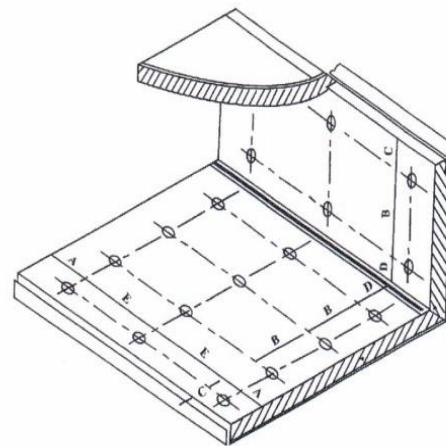
Dimensions



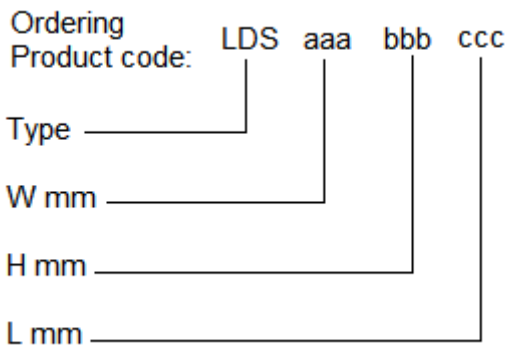
Description

SARA'S offers Lined single wall rectangular duct for acoustical and thermal control. Liner applied to the inner surface of the sheet metal duct work using retardant adhesive and pins.

- Two types of fasteners are available, adhesive and welded
- Applying adhesive at end of liner is standard
- Fixing a metal nosing an optional (as per client's request) SARA Standard liner is made of duct liner fiber glass, 25mm thicknesses, 48kg/m³ density
- Other thicknesses densities are available upon request.



All Transverse edges are coated with adhesive except when nosing is present



Maximum Spacing for Fasteners
Actual intervals are approximate

Velocity *	Dimensions				
	A	B	C	D	E
0-2500 FPM	3"	12"	4"	6"	18"
(0-12.7 MPS)	(76.2)	(305)	(102)	(152)	(457)
0-2500 FPM	3"	6"	4"	6"	16"
(12.7-30.5 MPS)	(76.2)	(305)	(102)	(152)	(406)

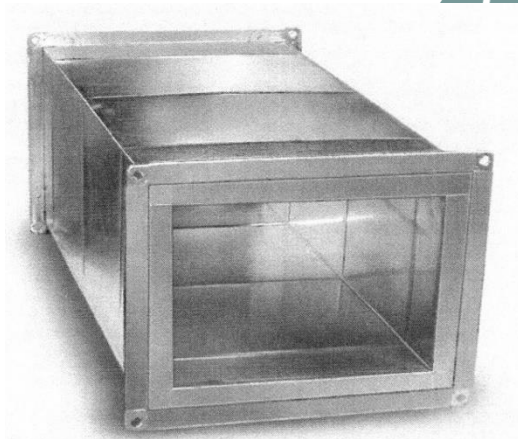
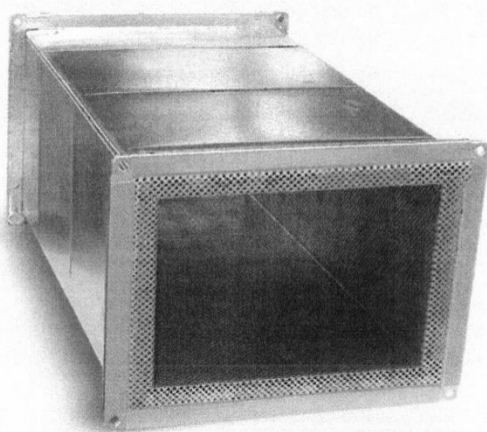
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DOUBLE WALL DUCTS



DWD



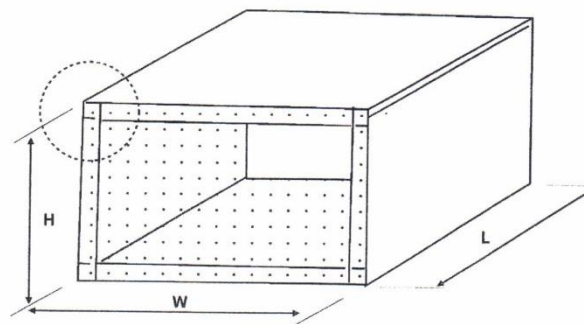
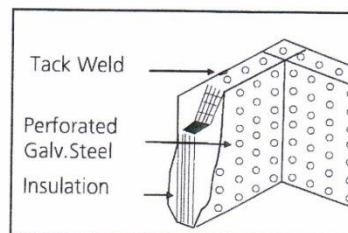
Description

SARA'S has a complete line of double wall insulated duct & fittings, each piece is constructed of solid metal outer shell and inner shell surrounded by a layer of insulation.

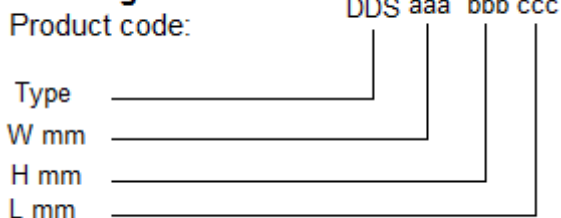
Perforated sheet is used as inner shell as optional.

The insulation serves both thermal & acoustical purposes. Our liner insulation is black woven fibber glass 1" thick, 48kg/m³ density. Several types of insulation materials, densities, thicknesses are available.

Dimensions



Ordering



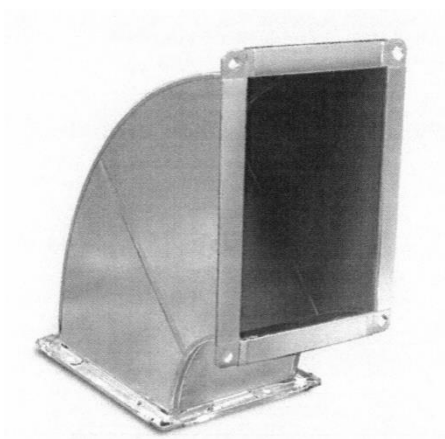
AN ISO 9001: 2015 CERTIFIED COMPANY



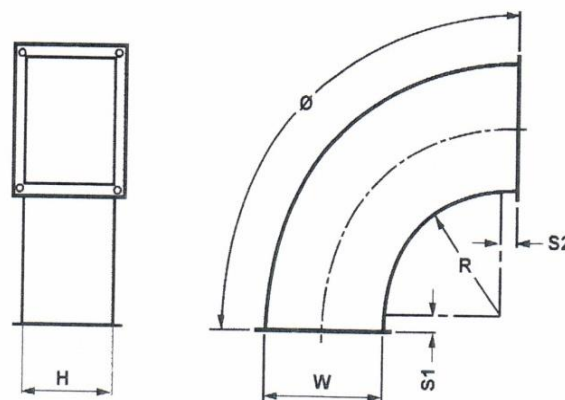
ELBOW



Dimensions



$\varnothing = 1^\circ \text{ to } 90^\circ$
 $R = W$



Description

RADIUS ELBOW WITHOUT SPLITTER VANE

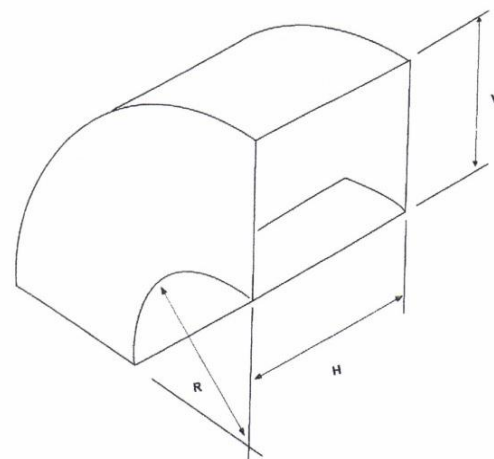
WIDTH (W-mm)

HEIGHT (H-mm)

RADIUS (R-mm)

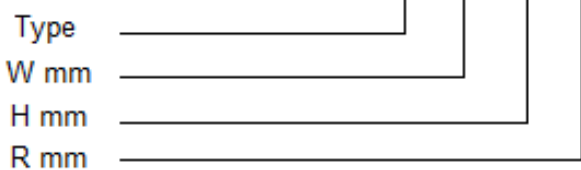
"R" = W

$\varnothing = 1^\circ \text{ to } 90^\circ$



Ordering

Product code: ER aaa bbb ccc



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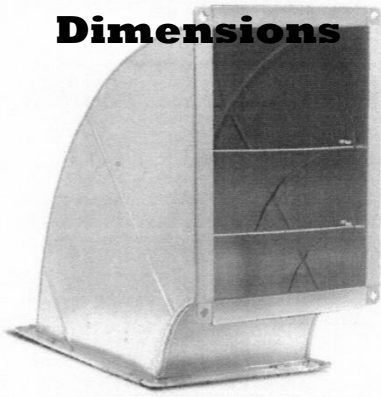


RADIUS ELBOW WITH SPLITTER

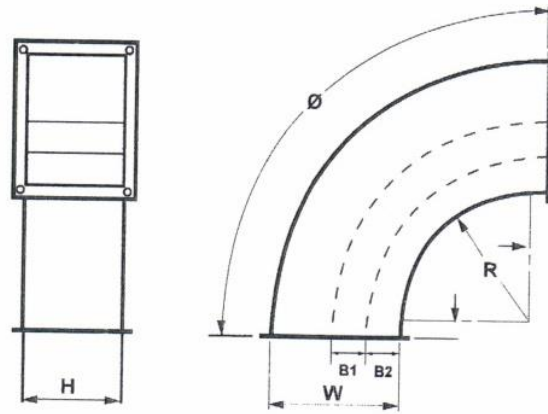


RE

Dimensions

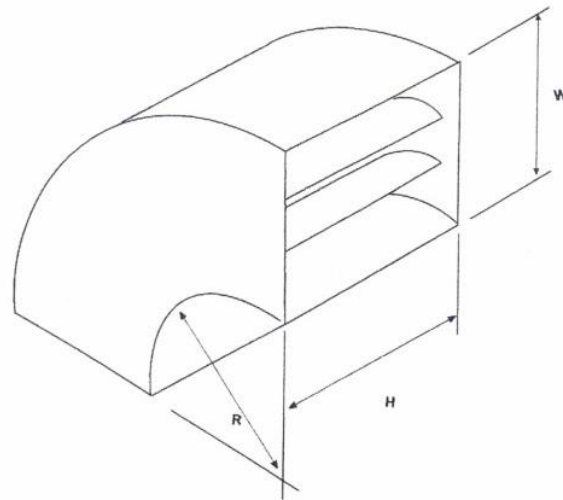


$\varnothing = 1^\circ$ to 90°
 $R < W$



Description

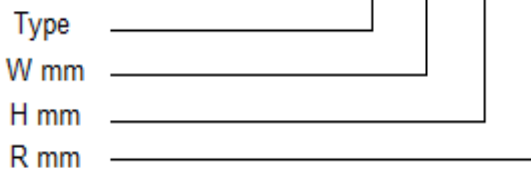
Radius elbow with splitter vane throat radius
 R is less than W (width)
 Width (W-mm)
 Height (H-mm)
 Radius (R-mm)



Ordering

Product code:

EVR aaa bbb ccc



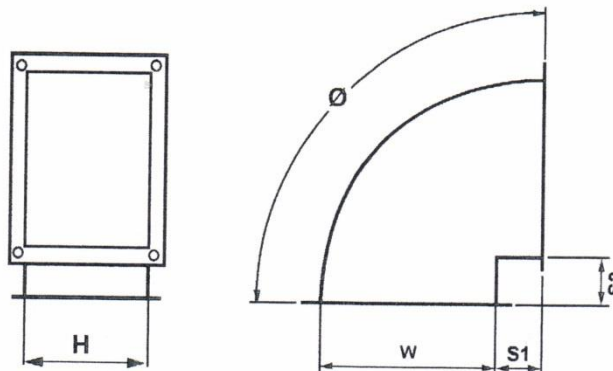
RADIUS ELBOW WITH SQUARE THROAT



RES



Dimensions



Description

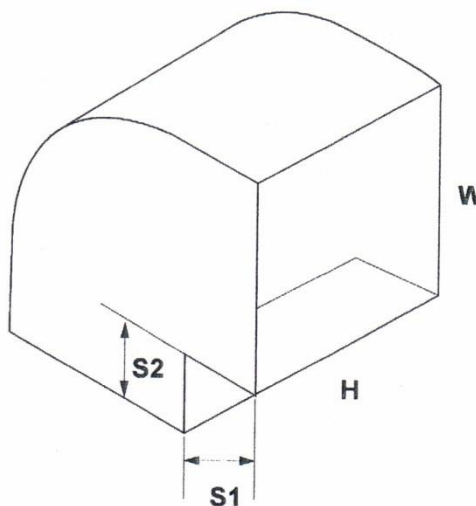
Radius elbow with square throat ERS

W= WIDTH mm

H= HEIGHT mm

$\varnothing = 1^\circ$ to 90°

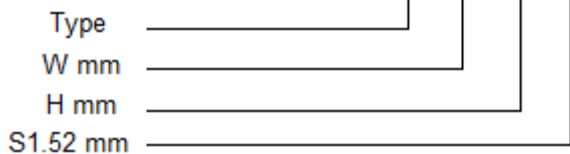
S1, S2 ≥ 100 mm



Ordering

Product code:

ERS aaa bbb ccc



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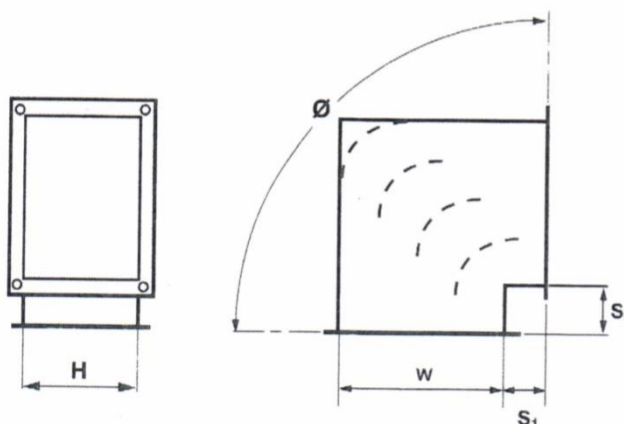
MITERED ELBOW WITH TURNING VANES



MEV



Dimensions



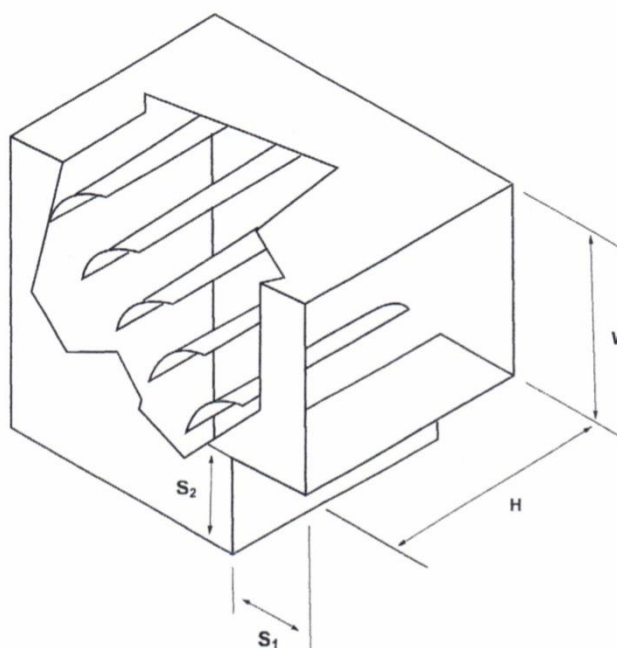
Description

Mitered Elbow with Turning Vanes MEV

WIDTH (W1 – mm)

HEIGHT (H1 – mm)

S1, S2 ≥ 100mm



Ordering

Product code:

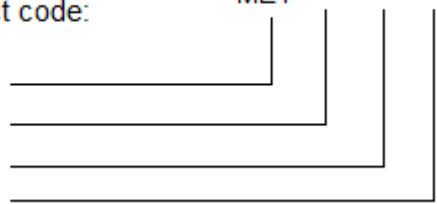
MEY aaa bbb ccc

Type

W mm

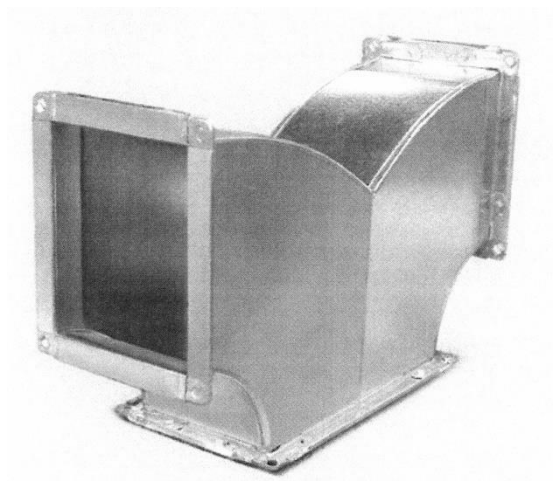
H mm

S1.52 mm

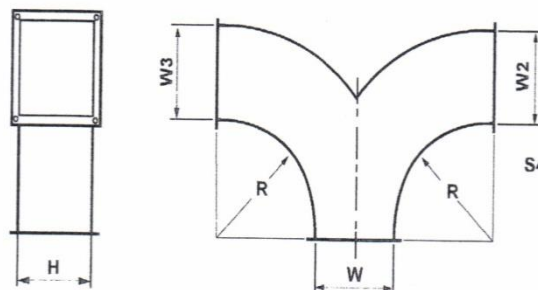


Y - BRANCH

R Y B



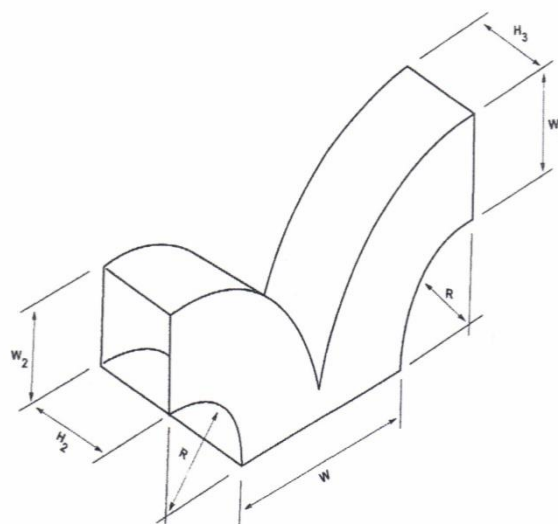
Dimensions



Description

Y – Branch

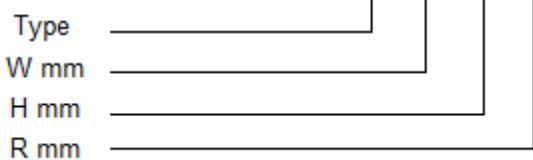
Available with splitter damper



Ordering

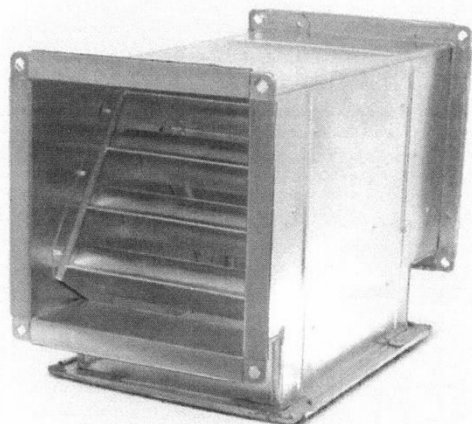
Product code:

R Y B aaa bbb ccc

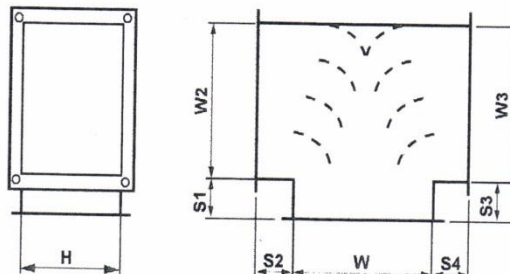


TEE WITH TURNING VANE

RT

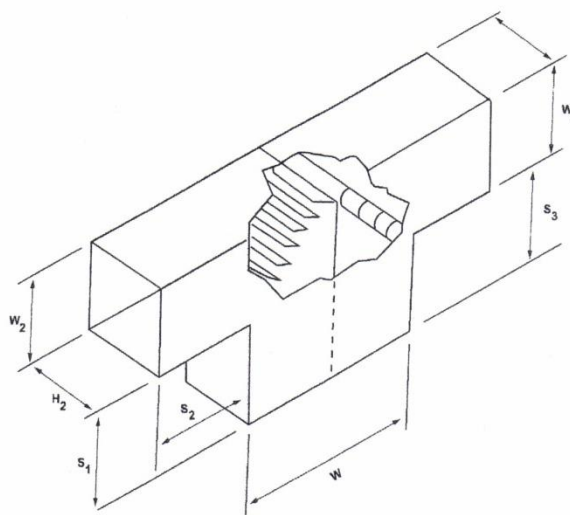


Dimensions



Description

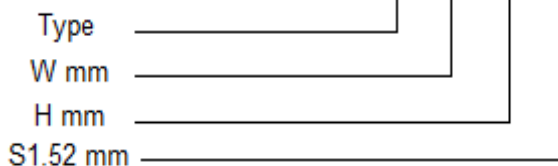
TEE



Ordering

Product code:

RT aaa bbb ccc

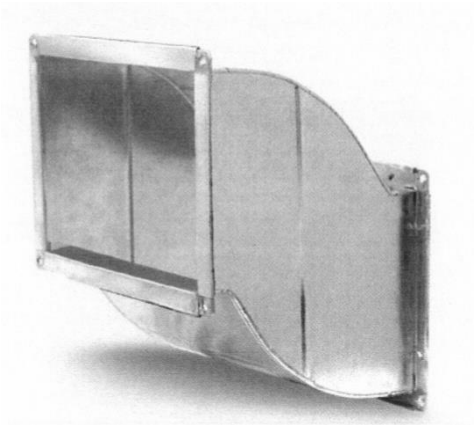


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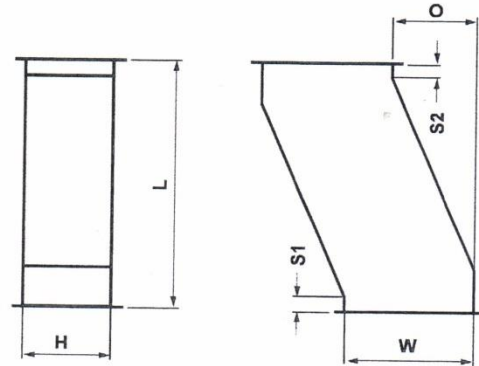


OFFSET

ROOF



Dimensions



Description

OFFS-OFFSET

WIDTH (W – mm)

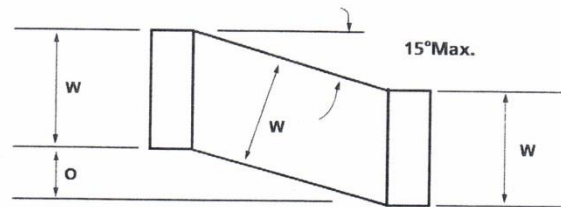
HEIGHT (H – mm)

OFFSET (O – mm)

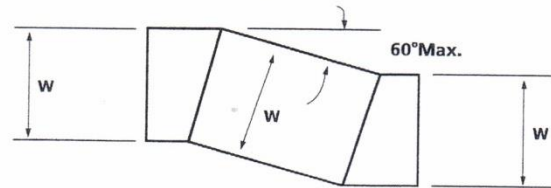
LENGTH (L – mm)

$L=2w$

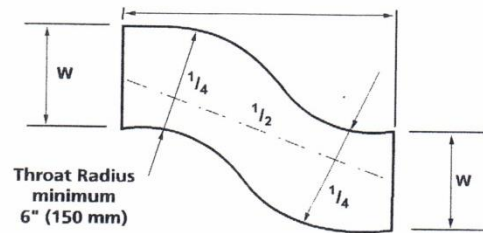
$S1, S2 \geq 100m$



Offset Type 1 (Angled)



Offset Type 2 (Mitered)

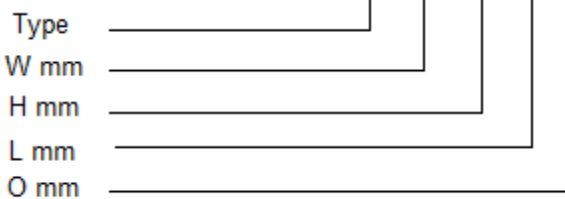


Offset Type 3 (Radiussed or ogee)

Ordering

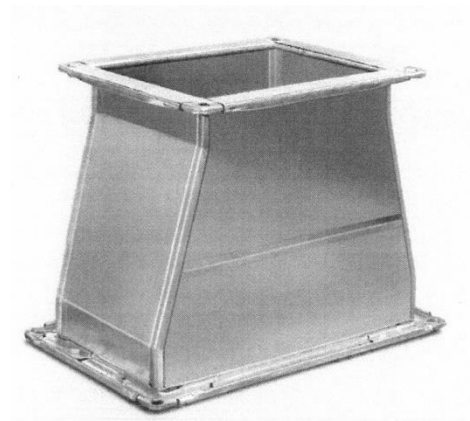
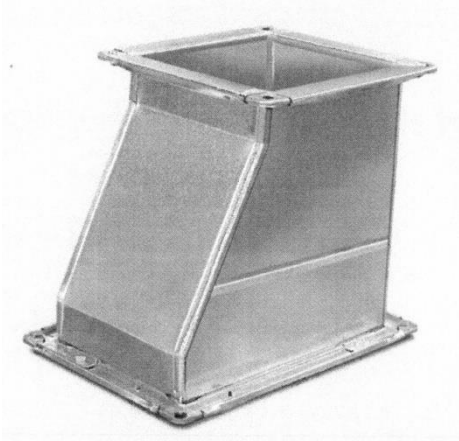
Product code:

ROFF aaa bbb ccc ddd



DUCT REDUCER

RDR

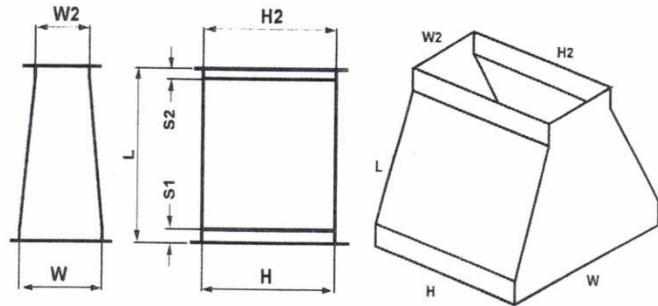


Description

Concentric Reducer
Eccentric Reducer

WIDTH (W – mm)
HEIGHT (H – mm)
WIDTH2 (W2 – mm)
HEIGHT 2 (H2 – mm)
LENGTH (L – MM)
S1, S2 mm

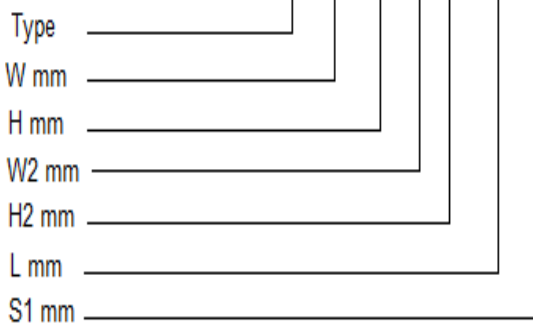
Dimensions



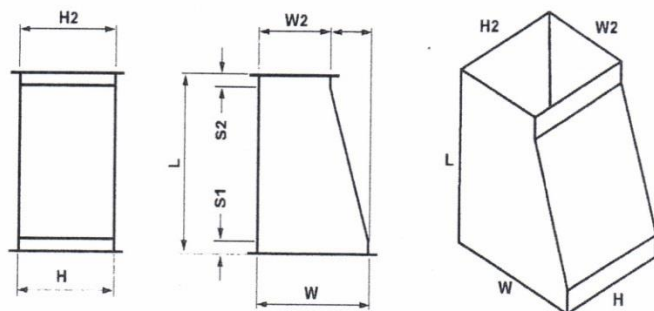
Ordering

Product code:

RDR aaa bbb ccc ddd eee fff



Eccentric Reducer



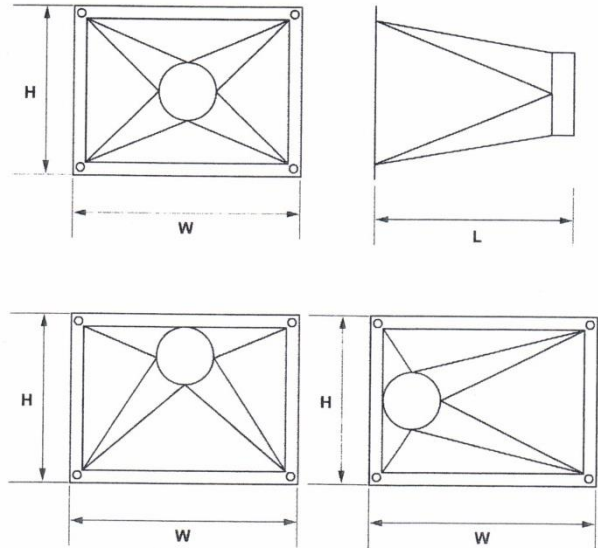
RECTANGULAR TO ROUND



TRR



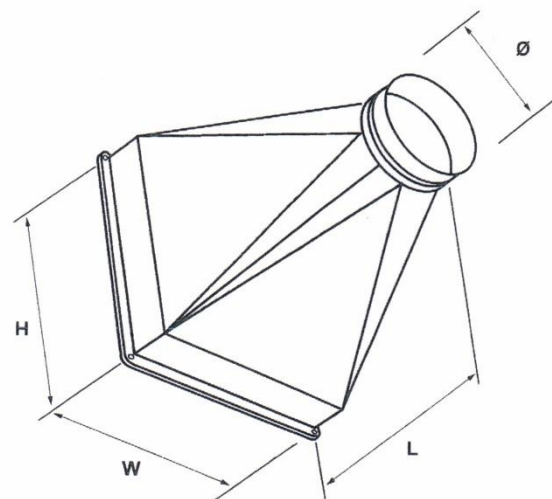
Dimensions



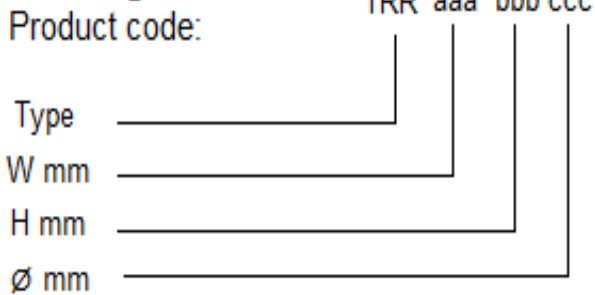
Description

- Concentric TRR
- Eccentric TRR
- Rectangular to Round TRR

- WIDTH (W – mm)
- HEIGHT (H – mm)
- LENGTH (L – MM)
- Diameter (ϕ – mm)

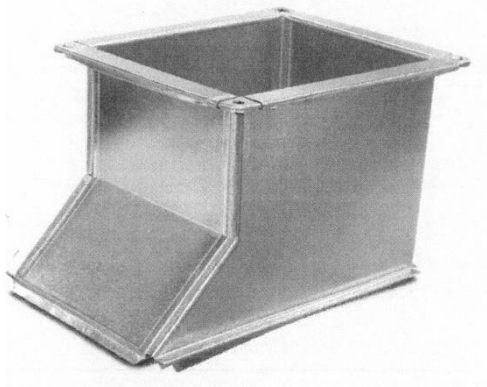


Ordering

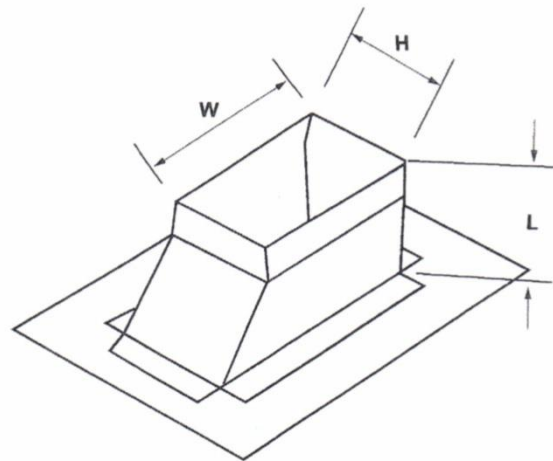
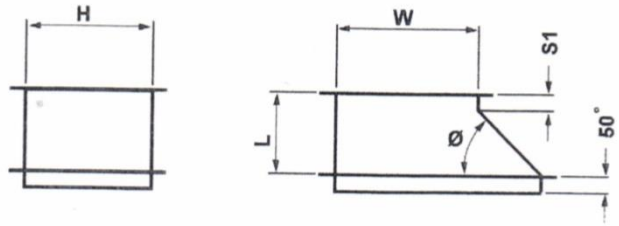


45° TAKE OFF

RTO 45°



Dimensions



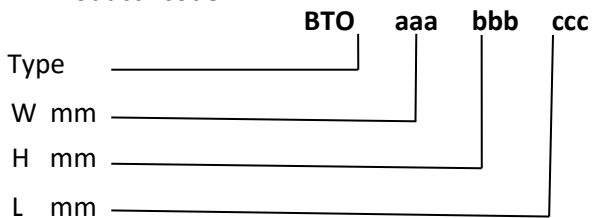
Description

Branch Connection RTO 45°

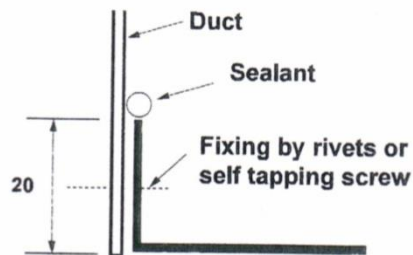
- WIDTH (W – mm)
- HEIGHT (H – mm)
- LENGTH (L – MM)
- ϕ – 45°

Ordering

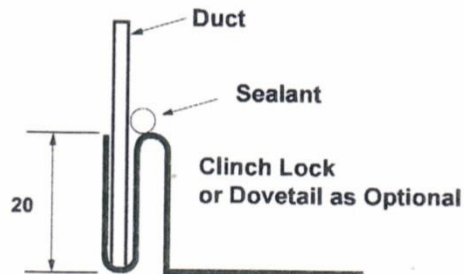
Product code



Detail - A

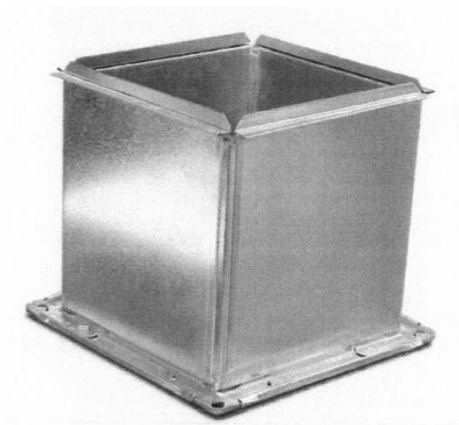


Straight Tap as a Standard

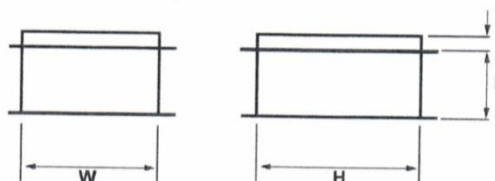


STRAIGHT TAKE OFF

STO



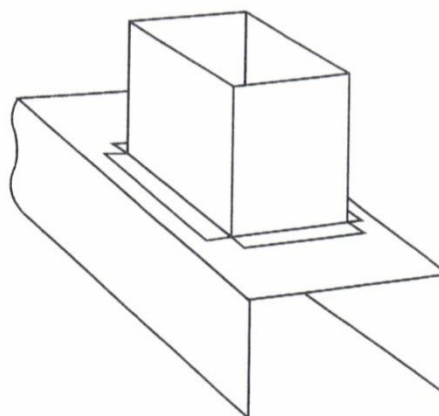
Dimension



Description

Rectangular Duct Branch Connection Straight Tank off

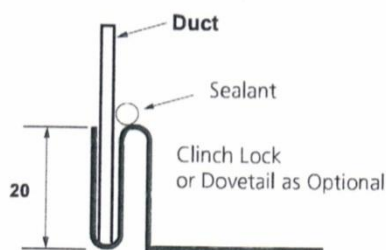
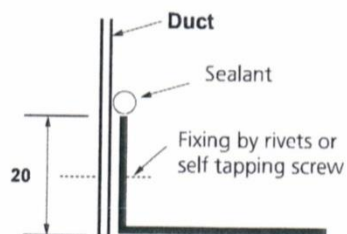
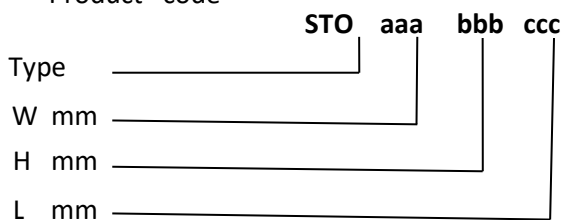
- WIDTH (W – mm)
- HEIGHT (H – mm)
- LENGTH (L – MM)



Detail - A

Ordering

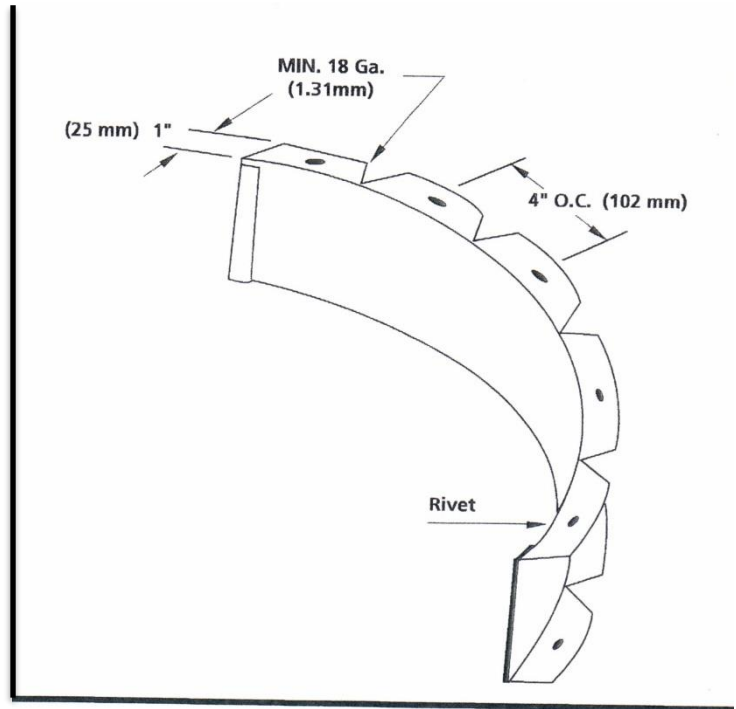
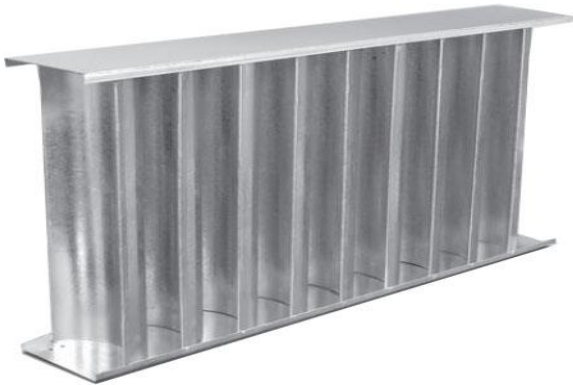
Product code



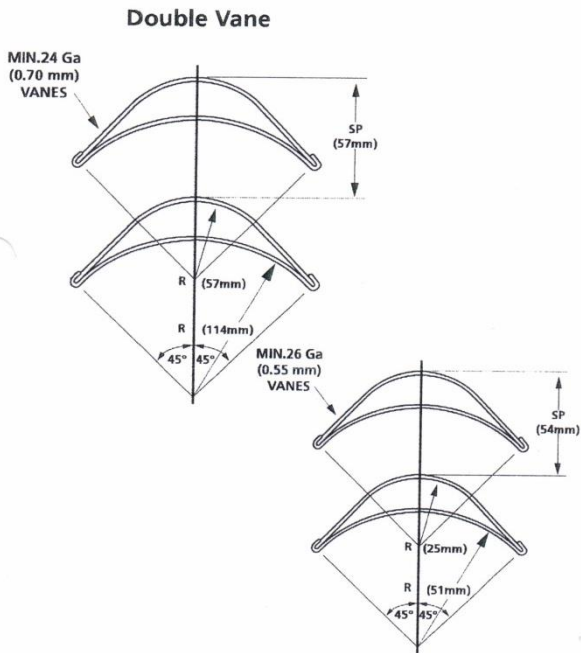
FABRICATION & ASSEMBLY OF TURNING VANES



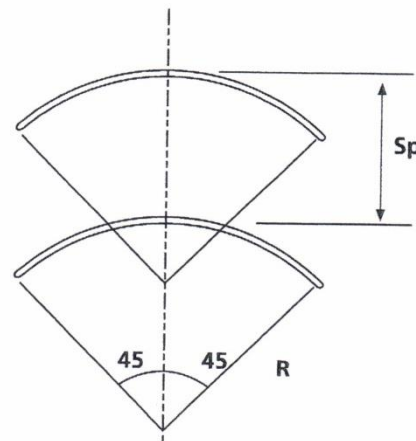
Short Radius Vanes



Description



Single Vane



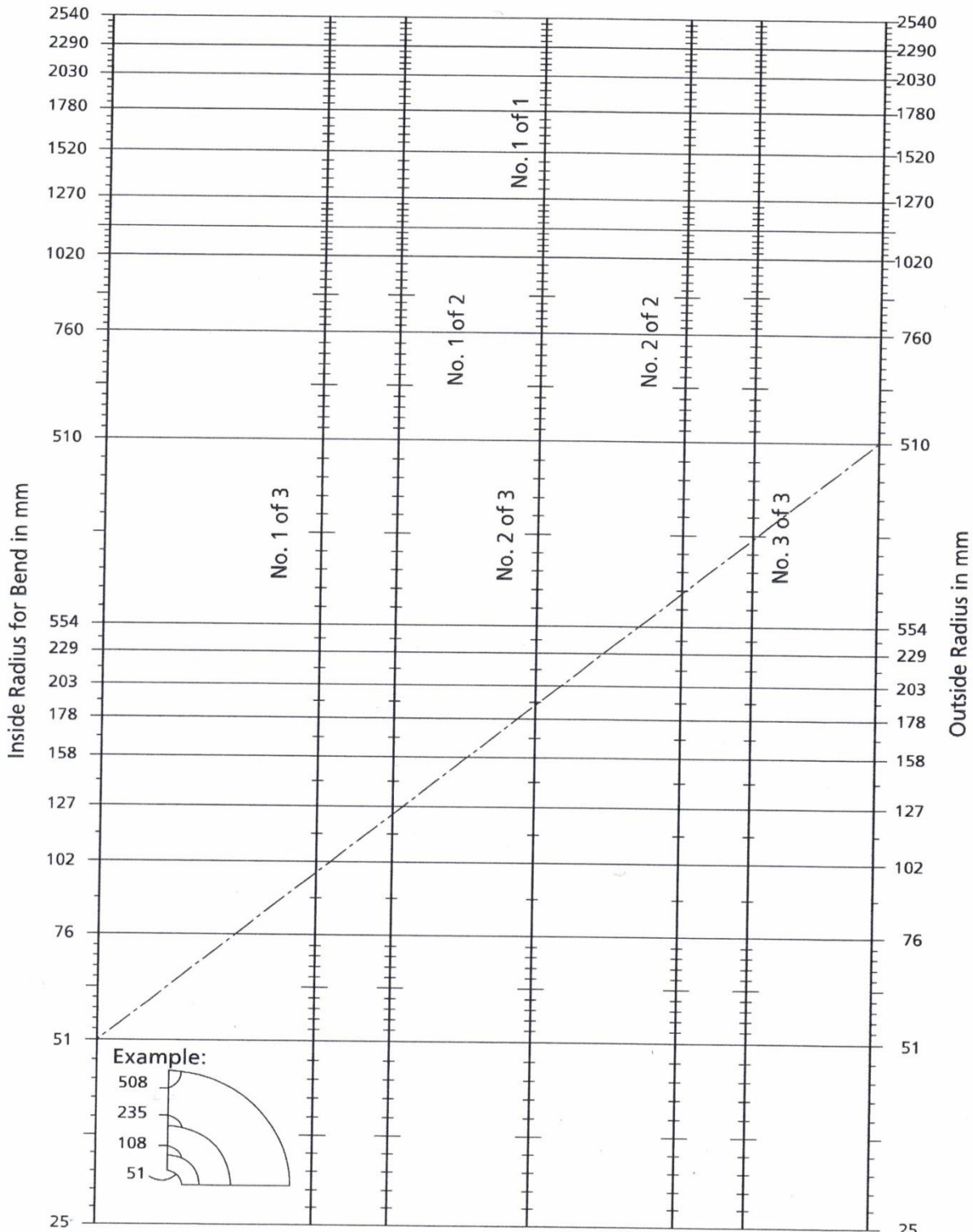
DUCT SIZE	Double Vane Schedule			
	Type	R	Sp	Ga
0-1219	Small	51	54	26(0.55mm)
1219 Up	Large	114	83	24(0.7mm)
* 1500 Up Segmented				

DUCT SIZE	Single Vane Schedule			
	Type	R	Sp	Ga
0-914	Small	50	38	24(0.7mm)
914 Up	Large	114	83	22(0.85mm)
* 1500 Up Segmented				



SPLITTER VANES

Number of short radius vanes

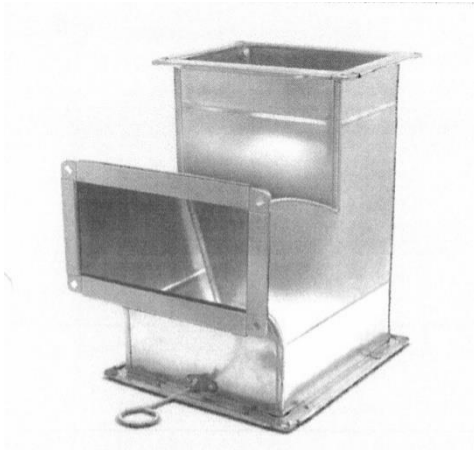


*No. 1 of 76 mm i.e No. 1 vane of a total of 3 vanes *No. 2 of 76 mm i.e No. 2 vane of a total of 3 vanes

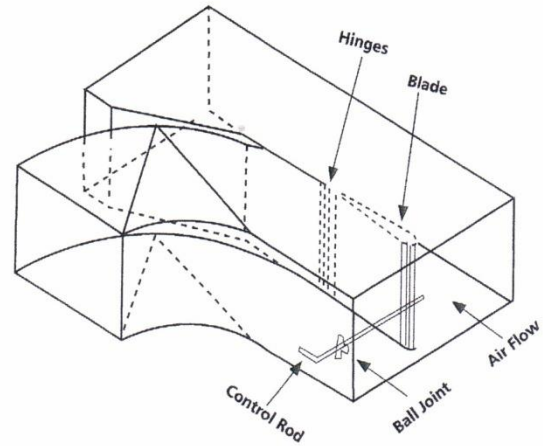


R- TYPE

RTY



Dimensions

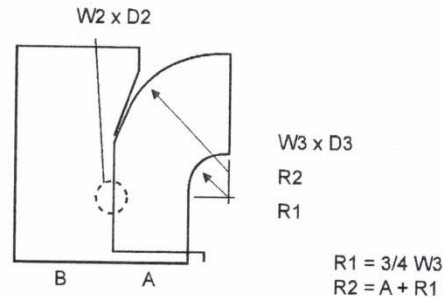
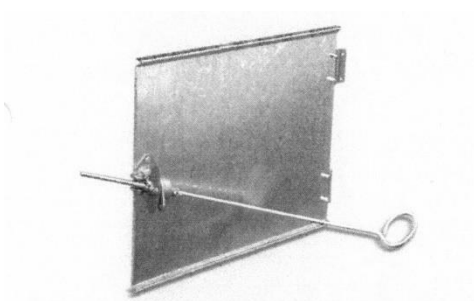


Description

Splitter Damper

- Available Aerofoil blade as a standard
- Single blade

Single blade



W1 x D1

Splitter Damper Length is Equal to 1.5 A

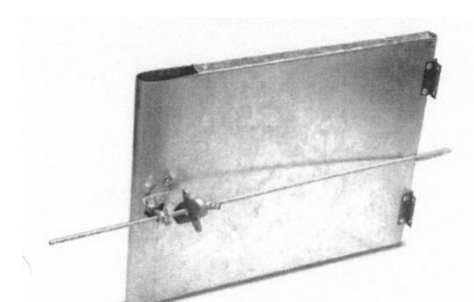
Where: A = 100 mm Min.

Trunk may be divided using:

$$A = \left(\frac{W3 \times D3}{(W2 \times D2) + (W3 \times D3)} \right) W1$$

$$B = \left(\frac{W2 \times D2}{(W2 \times D2) + (W3 \times D3)} \right) W1$$

Aerofoil blade



- One Rod Up To 610Mm depth (D1)
- Two rods 615 mm to 1525 mm depth (D1)
- Three rods above 1525 mm depth (D1)

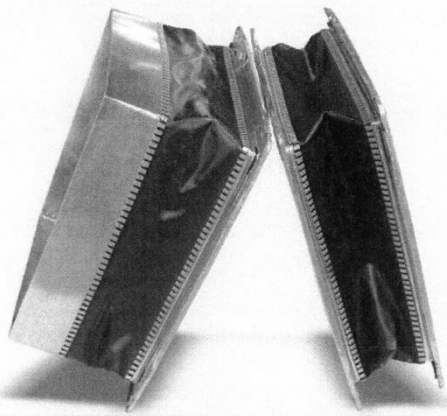
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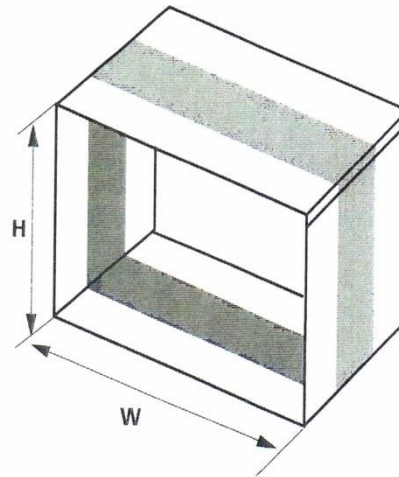
FLEXIBLE DUCT CONNECTION



FDC



Dimensions

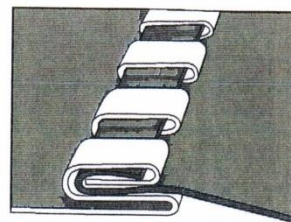
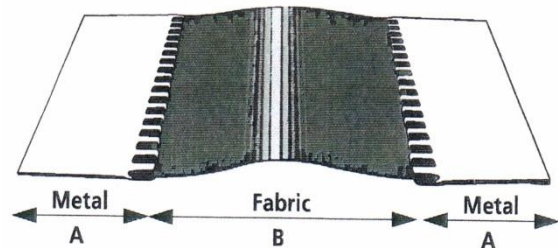


Description

Flexible duct connector eliminates duct system noises and vibrations.

In order to isolate vibrations caused by air handling units, fans or other equipment connected to air duct, it is highly recommended to install a flexible duct connector joint between the outlet of these devices and the air duct.

- Flexible connector ends are vary upon request (Duct made, S & drive or flange type).
- Standard size: A x B x A
- FDCJ 1.75" X 3" X 1.75"
- FDCE 2.75" X 4" X 2.75"



Guard Lock Seam

Ordering

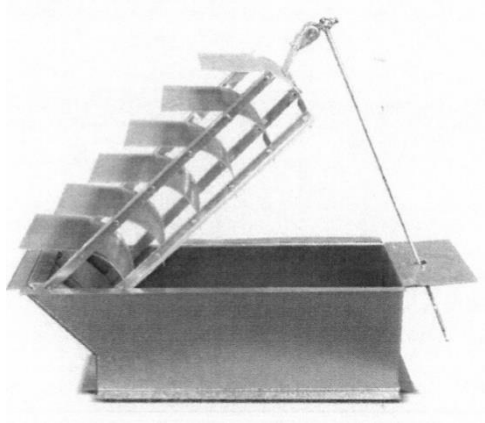
Product code

		FDC	aaa	bbb
Type	_____			
W mm	_____			
H mm	_____			

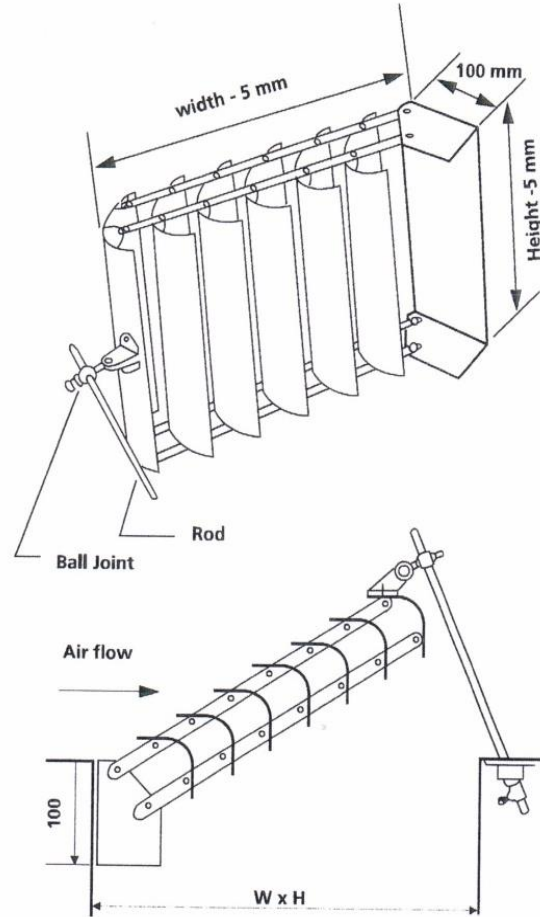


AIR EXTRACTOR

AE



Dimensions

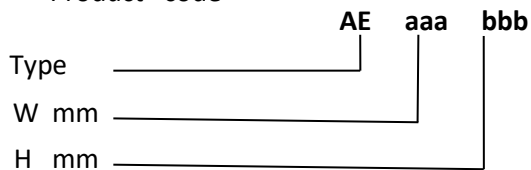


Description

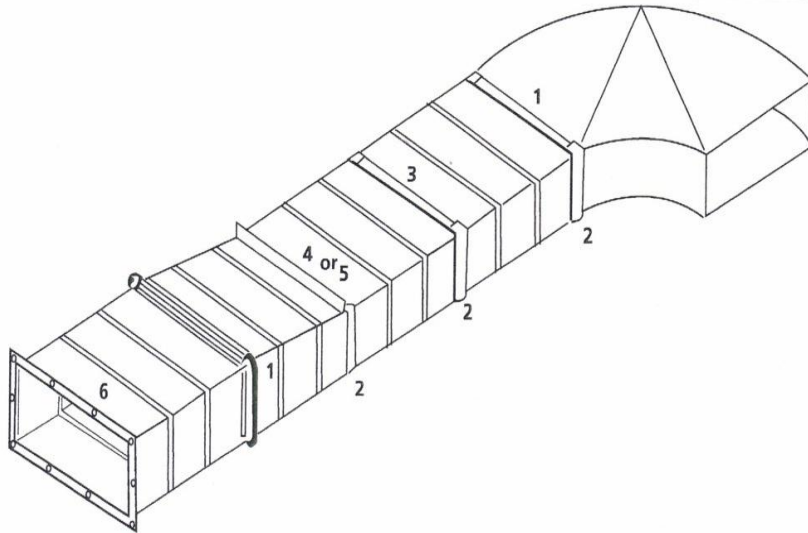
AE is using for extract and control air flow
 Into take offs and minimizing air turning
 Pressure losses.
 Air extractor can be installed at main or
 Branch duct

Ordering

Product code



TRANSVER CONNECTOR



TPC FLANGE



FLANGED (WITH GASKET) T-25a

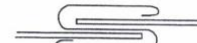
1

DRIVE SLIP & HEMMED "S" CLIP



Drive Slip

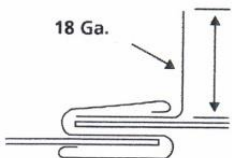
2



Hemmed "S" Slip

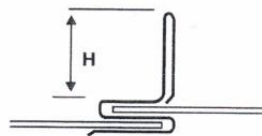
3

Reinforced "S" Clip & Standing S



Reinforced "S" Slip

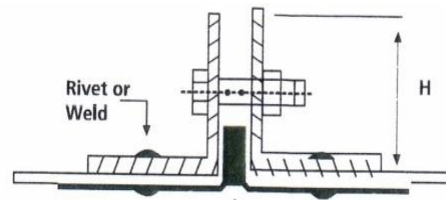
4



Standing S

5

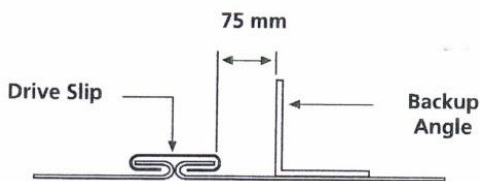
Companion Angles



Companion Angles

6

Backup angle for Drive Clip



Application		
Pressure Class	Duct Height	Backup Angles Size
2" W.G.	458-915	25x25x3mm
3" W.G.	458-559	25x25x3mm
4" W.G.	407-508	25x25x3mm



Rectangular Ductwork Construction Schedule.

2" WG=500 Pascal pressure class- As per SMACNA 2005, 3rd Edition



Max.Duct Dimension Mm (Inch)	Sheet Gauge.	Min. Sheet Thickness mm	Transverse Joint	Max. Distance Between Joint (mm)	Intermediate Reinforcement
0 – 250 (10")	24	0.6	Hemmed "S" clip Drive cleat	1200	None
251 – 450 (11" – 18")	24	0.6	Hemmed "S" clip Drive cleat	1200	None
451 – 700 (19" – 28")	24	0.6	Standing "S" Drive Cleat	1200	None
701 – 900 (29" – 36")	24	0.6	Standing "S Drive cleat with 25x25x3mm angle	1200	None
901 – 1200 (37" – 48")	22	0.8	Profile flange 35mm	1200	None
1201 – 1350 (49" – 54")	20	1.00	Profile Flange 35mm	1200	None
1351 – 1500 (55" – 60")	18	1.20	Profile Flange 35mm	1200	None
1501 – 2100 (61" – 84")	18	1.20	Companion Angle 50x50x5mm	1200	None
2101 – 2400 (85" – 96")	18	1.20	Companion Angle 50x50x5mm	1200	None
2401 – 2700 (97" – 108")	18	1.20	Companion Angle 50x50x5mm	1200	50x50x5mm Angle @600mm C-C
2701 – Above (109")	18	1.20	Companion Angle 50x50x5mm	1200	50x50x5mm Angle @600mm C-C

Notes

- 1 Above materials are made of galvanized steel G90/GSM 275, ASTM A653
- 2 Transverse duct connectors are based on max. 1220mm spacing
- 3 Plain sheet or stiffened sheet by means of beading shall be used
- 4 Duct size above 2500mm will be supplied in knockdown form and assembled at site by others

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Rectangular Ductwork Construction Schedule.

3" WG=750 Pascal pressure class- As per SMACNA 2005, 3rd Edition



Max.Duct Dimension Mm (Inch)	Sheet Gauge.	Min. Sheet Thickness mm	Transverse Joint	Max. Distance Between Joint (mm)	Intermediate Reinforcement
0 – 250 (10")	24	0.6	Standing "S" clip Drive cleat	1200	None
251 – 450 (11" – 18")	24	0.6	Standing "S" clip Drive cleat	1200	None
451 – 550 (19" – 22")	24	0.6	Standing "S Drive cleat with 25x25x3mm angle	1200	None
551 – 750 (29" – 36")	24	0.6	Profile Flange 35mm	1200	None
751 – 900 (31" – 36")	22	0.8	Profile flange 35mm	1200	None
901 – 1050 (37" – 42")	22	0.8	Profile Flange 35mm	1200	None
1051 – 1200 (43" – 48")	20	1.00	Profile Flange 35mm	1200	None
1201 – 1500 (49" – 60")	18	1.20	Companion Angle 50x50x5mm	1200	None
1501 – 2400 (61" – 96")	18	1.20	Companion Angle 50x50x5mm	1200	50x50x5mm Angle @600mm C-C
2401 – Above (97")	18	1.20	Companion Angle 50x50x5mm	1200	50x50x5mm Angle @600mm C-C

Notes

- 1 Above materials are made of galvanized steel G90/GSM 275, ASTM A653
- 2 Transverse duct connectors are based on max. 1220mm spacing
- 3 Plain sheet or stiffened sheet by means of beading shall be used
- 4 Duct size above 2500mm will be supplied in knockdown form and assembled at site by others

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Rectangular Ductwork Construction Schedule.

4" WG=1000 Pascal pressure class- As per SMACNA 2005, 3rd Edition

Max.Duct Dimension Mm (Inch)	Sheet Gauge.	Min. Sheet Thickness mm	Transverse Joint	Max. Distance Between Joint (mm)	Intermediate Reinforcement
0 – 400 (16")	24	0.6	Standing "S" clip Drive cleat	1200	None
401 – 500 (17" – 20")	24	0.6	Standing "S Drive cleat with 25x25x3mm angle	1200	None
501 – 750 (21" – 30")	24	0.6	Profile Flange 35mm	1200	None
751 – 900 (31" – 36")	22	0.8	Profile Flange 35mm	1200	None
901 – 1050 (37" – 42")	20	1.00	Profile flange 35mm	1200	None
1051 – 1350 (43" – 54")	18	1.2	Companion Angle 50x50x5mm	1200	None
1351 – 2100 (55" – 84")	18	1.20	Companion Angle 50x50x5mm	1200	50x50x5mm Angle @600mm C-C
2101 – 2400 (85" – 96")	18	1.20	Companion Angle 50x50x5mm	1200	50x50x5mm Angle @600mm C-C
2401 – Above (97")	18	1.20	Companion Angle 50x50x5mm + Tierod	1200	50x50x5mm Angle @600mm C-C

Notes

- 1 Above materials are made of galvanized steel G90/GSM 275, ASTM A653
- 2 Transverse duct connectors are based on max. 1220mm spacing
- 3 Plain sheet or stiffened sheet by means of beading shall be used
- 4 Duct size above 2500mm will be supplied in knockdown form and assembled at site by others

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Rectangular Ductwork Construction Schedule.

6" WG=1500 Pascal pressure class- As per SMACHNA 2005, 3rd Edition



Max.Duct Dimension Mm (Inch)	Sheet Gauge.	Min. Sheet Thickness mm	Transverse Joint	Max. Distance Between Joint (mm)	Intermediate Reinforcement
0 – 500 (22")	24	0.6	Profile Flange 35mm	1200	None
551 – 650 (23" – 26")	22	0.8	Profile Flange 35mm	1200	None
651 – 750 (27" – 30")	22	0.8	Profile Flange 35mm	1200	None
751 – 900 (31" – 36")	20	1.00	Profile Flange 35mm	1200	None
901 – 1200 (37" – 48")	18	1.20	Companion Angle 50x50x5mm	1200	None
1201 – 1500 (49" – 60")	18	1.20	Companion Angle 50x50x5mm	1200	50x50x5mm Angle + Tie rod @600mm C-C
1501 – 2100 (61" – 84")	18	1.20	Companion Angle 50x50x5mm	1200	50x50x5mm Angle + Tie rod @600mm C-C
2101 – 2700 (85" – 108")	18	1.20	Companion Angle 50x50x5mm + Tierod	1200	50x50x5mm Angle + Tie rod @600mm C-C
2401 – Above (109")	18	1.20	Companion Angle 50x50x5mm + Tierod	1200	50x50x5mm Angle + Tie rod @600mm C-C

Notes

- 1 Above materials are made of galvanized steel G90/GSM 275, ASTM A653
- 2 Transverse duct connectors are based on max. 1220mm spacing
- 3 Plain sheet or stiffened sheet by means of beading shall be used
- 4 Duct size above 2500mm will be supplied in knockdown form and assembled at site by others

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Rectangular Ductwork Construction Schedule.

10" WG=2500 Pascal pressure class- As per SMACNA 2005, 3rd Edition

Max.Duct Dimension Mm (Inch)	Sheet Gauge.	Min. Sheet Thickness mm	Transverse Joint	Max. Distance Between Joint (mm)	Intermediate Reinforcement
0 – 300 (12")	24	0.60	Profile Flange 35mm	1200	None
301 – 400 (13" – 16")	22	0.80	Profile Flange 35mm	1200	None
401 – 500 (17" – 20")	20	1.00	Profile Flange 35mm	1200	None
501 – 550 (21" – 22")	20	1.00	Profile Flange 35mm	1200	None
501 – 650 (23" – 26")	20	1.00	Profile Flange 35mm	1200	None
651 – 700 (27" – 28")	18	1.20	Companion Angle 40x40x3mm	1200	None
701 – 900 (29" – 36")	18	1.20	Companion Angle 50x50x5mm	1200	None
901 – 1350 (37" – 54")	18	1.20	Companion Angle 50x50x5mm	1200	50x50x5mm Angle + Tie rod @600mm C-C
1351 – 1500 (55" – 60")	18	1.20	Companion Angle 50x50x5mm	1200	50x50x5mm Angle + Tie rod @600mm C-C
1501 – 1800 (61" – 72")	18	1.20	Companion Angle 50x50x5mm + Tierod	1200	50x50x5mm Angle + Tie rod @600mm C-C
1801 – Above (73")	16	1.50	Companion Angle 50x50x5mm + Tierod	1200	50x50x5mm Angle + Tie rod @600mm C-C

Notes

- 1 Above materials are made of galvanized steel G90/GSM 275, ASTM A653
- 2 Transverse duct connectors are based on max. 1220mm spacing
- 3 Plain sheet or stiffened sheet by means of beading shall be used
- 4 Duct size above 2500mm will be supplied in knockdown form and assembled at site by others.

Sara International Factory
For Air Conditioning Duct

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SPIRAL DUCT & FITTINGS

Sara International Factory
For Air Conditioning Duct

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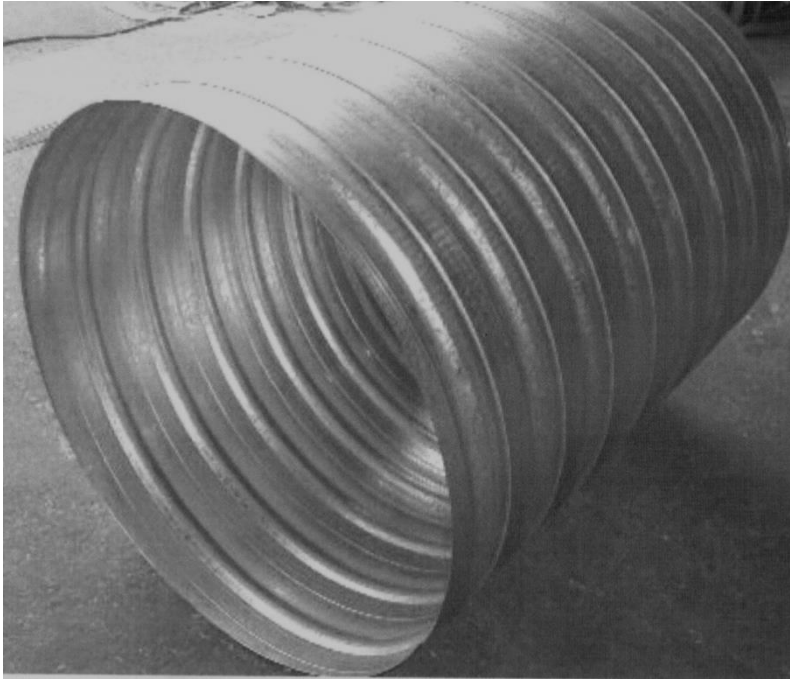
SPIRAL DUCT CONSTRUCTION STANDARD (POSITIVE PRESSURE)										
DUCT DIAMETER					500 Pa. (2" W.G.) Positive Pressure		1000 Pa. (4" W.G.) Positive Pressure		2500 Pa. (10" W.G.) Positive Pressure	
					Spiral Seam Gauge	Longitudinal Seam Gauge	Spiral Seam Gauge	Longitudinal Seam Gauge	Spiral Seam Gauge	Longitudinal Seam Gauge
MM	INCH		INCH	MM	THICK	THICK	THICK	THICK	THICK	THICK
75	3	THRU	8	200	26(0.55)	26(0.55)	26(0.55)	26(0.55)	26(0.55)	24(0.70)
201	9	THRU	14	355	26(0.55)	26(0.55)	26(0.55)	26(0.55)	26(0.55)	24(0.70)
356	15	THRU	26	660	26(0.55)	24(0.70)	24(0.70)	22(0.80)	24(0.70)	22(0.80)
661	27	THRU	36	910	24(0.70)	22(0.80)	22(0.80)	20(1.00)	22(0.80)	20(1.00)
911	37	THRU	50	1270	22(0.80)	20(1.00)	20(1.00)	20(1.00)	20(1.00)	20(1.00)
1271	51	THRU	60	1520	20(1.00)	18(1.20)	18(1.20)	18(1.20)	18(1.20)	18(1.20)
1521	61	THRU	84	2130	18(1.20)	16(1.61)	18(1.20)	16(1.61)	18(1.20)	16(1.61)
2131	85	THRU	98	2500	18(1.20)	16(1.61)	16(1.61)	14(1.99)	16(1.40)	14(1.99)

Circular Ducts and Fittings shall have a wall thickness not less than that specified for longitudinal seam straight ducts in table.
 Corrugated Ducts are not reflected in the Table
 longitudinal Seam Ducts are continuously welded and supplied in 1 meter long.
 Above schedule meet the requirements of SMACNA HVAC Duct Construction Stds, Metals and Flexible Second Edition 1995

SPIRAL DUCT CONSTRUCTION STANDARD (NEGATIVE PRESSURE)										
DUCT DIAMETER					500 Pa. (2" W.G.) Negative Pressure		1000 Pa. (4" W.G.) Negative Pressure		2500 Pa. (10" W.G.) Negative Pressure	
					Spiral Seam Gauge	Longitudinal Seam Gauge	Spiral Seam Gauge	Longitudinal Seam Gauge	Spiral Seam Gauge	Longitudinal Seam Gauge
MM	INCH		INCH	MM	THICK	THICK	THICK	THICK	THICK	THICK
75	3	THRU	8	200	26(0.55)	26(0.55)	26(0.55)	26(0.55)	26(0.55)	24(0.70)
201	8	THRU	12	305	26(0.55)	26(0.55)	26(0.55)	24(0.70)	24(0.70)	22(0.80)
306	12	THRU	16	400	26(0.55)	24(0.70)	24(0.70)	22(0.80)	22(0.80)	20(1.00)
401	16	THRU	20	508	24(0.70)	22(0.80)	22(0.80)	20(1.00)	22(0.80)	18(1.20)
509	20	THRU	24	610	22(0.80)	20(1.00)	22(0.80)	18(1.20)	20(1.00)	16(1.61)
611	24	THRU	34	863	20(1.00)	18(1.20)	20(1.00)	16(1.61)	18(1.20)	16(1.61)
864	34	THRU	48	1219	20(1.00)	18(1.20)	18(1.20)	16(1.61)	18(1.20)	16(1.61)
1220	48	THRU	60	1524	18(1.20)	18(1.20)	18(1.20)	16(1.61)	18(1.20)	16(1.61)

Circular Ducts and Fittings shall have a wall thickness not less than that specified for longitudinal seam straight ducts in table.
 Corrugated Ducts are not reflected in the Table
 longitudinal Seam Ducts are continuously welded and supplied in 1 meter long.
 Above schedule meet the requirements of SMACNA HVAC Duct Construction Stds, Metals and Flexible Second Edition 1995

SPIRAL DUCT



STANDARD SIZE FOR SPIRAL DUCT
100 mm Dia
150 mm Dia
200 mm Dia
250 mm Dia
300 mm Dia
355 mm Dia
400 mm Dia
450 mm Dia
500 mm Dia
560 mm Dia
600 mm Dia
650 mm Dia
710 mm Dia
750 mm Dia
800 mm Dia

SPIRAL DUCT

Designed for maximum strength to weight ratio

All round Spiral Duct and fittings shall be manufactured from G-90 galvanized steel, conforming to ASTM and SMACNA standards. Standard elbows will have 1.5 center line radius. Other radii and vared elbows are available as needed. Elbows through 4" shall be, with stitch welded joints. Elbows 6" through 50" shall be gore-locked construction. All elbows above 51" shall also be gored, but with tack weld and sealed construction for use to 4" w.g., or solid welded for use to 10" w.g. Branch connections in medium pressure systems shall be conical for 90 degree taps, and straight for 45 degrees.

CORRUGATION DETAIL

15/1C 0.6-0.8 800

Corrugation depth 6-8mm



SINGLE WALL ROUND DUCTS & FITTINGS

PROFILES TYPES & MATERIALS



SPIRAL DUCTS AND FITTINGS

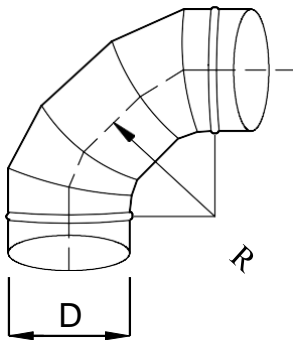
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ELBOW 90°

$R = 1.5d$

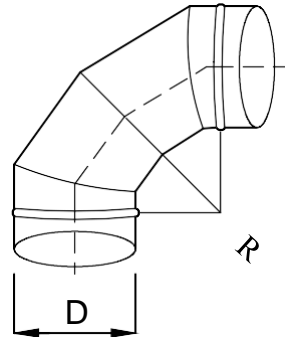
5-Gore Elbow (Segment as Standard)



TYPE - A

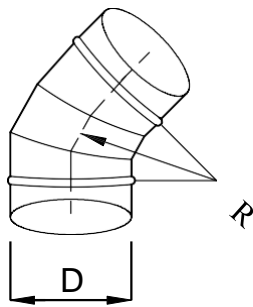
$R = D$

4- Gore Elbow



TYPE -B (4G)

ELBOW 45°

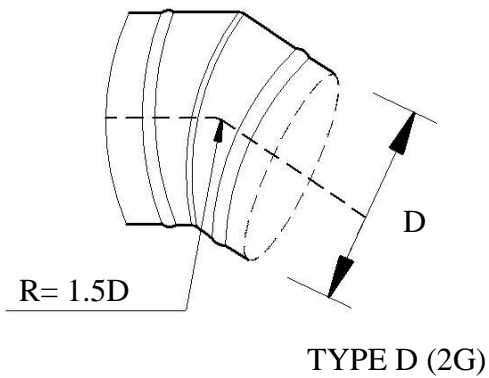


TYPE -C (3G)

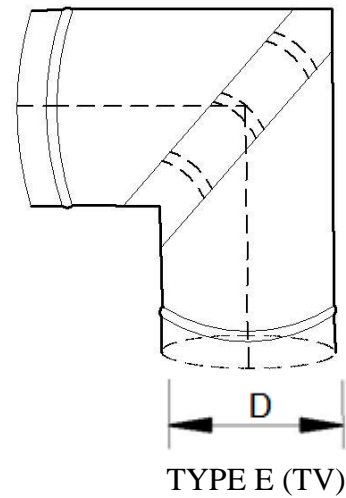
$R = 1.5d$

3- Gore Elbow (Segment as Standard)

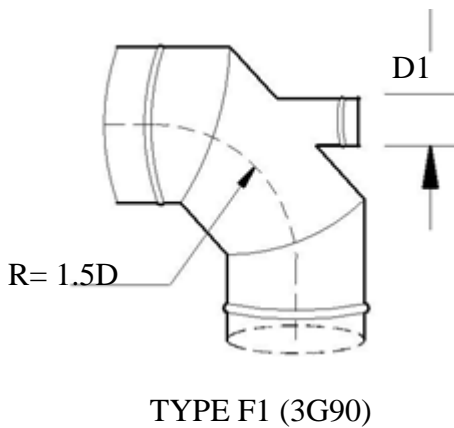
ELBOW 15°, 30°, 60°



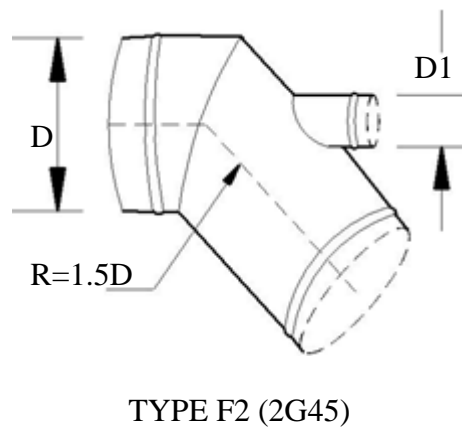
MITERED ELBOW 90° WITH TURNING VANES



HELL TAPPED ELBOW 90°



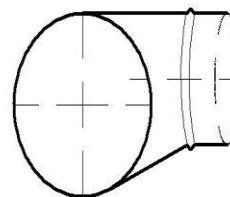
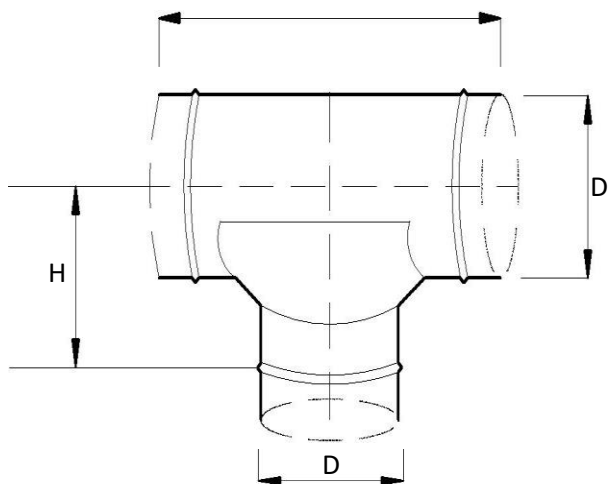
HELL TAPPED ELBOW 45°



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TEE (ECCENTRIC)



TYPE B (ECCENTRIC)

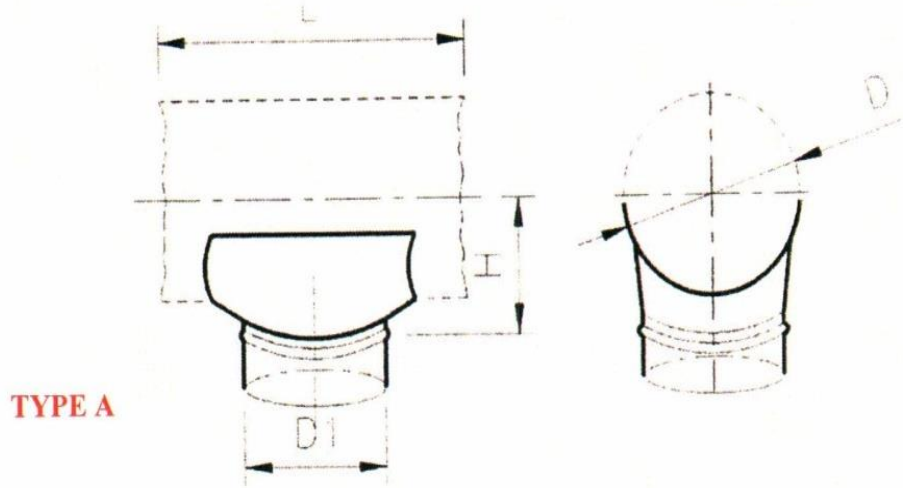
TYPE B (ECCENTRIC)

H (mm)	L (mm)	D/D1 (mm)
280	485	400/315
280	420	400/250
330	485	500/315
330	420	500/250
395	670	630/500
395	570	630/400
395	485	630/315
480	800	800/630
480	670	800/500
480	570	800/400
580	970	1000/800
580	800	1000/630
580	670	1000/500
730	1220	1250/1000
705	970	1250/800
705	800	1250/630

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COLAR SADDLE



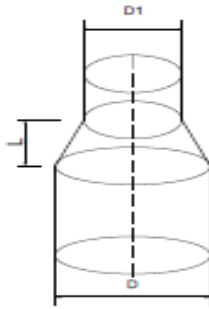
DD1 (mm)	L (mm)	H (mm)
63/63	183	110
80/63	183	120
100/63	183	130
80/80	200	120
100/80	200	130
125/80	200	140
160/80	200	160
200 / 80	200	180
250 / 80	200	205
100/100	220	130
125/100	220	140
160/100	220	160
200/100	220	180
250/100	220	205
315/100	220	237
125/125	245	140
160/125	245	160
200/125	245	180
250/125	245	205
315/125	245	237
400/125	245	280
160/160	280	160
200/160	280	180
250/160	280	205
315/160	280	237
400 / 160	280	280
500/160	280	330

D/D1 (mm)	L (mm)	H (mm)
355/125	245	257
355/160	280	257
355 / 200	320	257
500 / 200	320	330
630 / 200	320	395
250 / 250	370	205
315/250	370	237
355 / 250	370	257
400 / 250	370	280
500 / 250	370	330
630 / 250	370	395
800 / 250	370	480
315/315	435	237
355/315	435	257
400/315	435	280
500/315	435	330
630/315	435	395
800/315	435	480
1000/315	435	580
1250/315	435	705
355 / 355	475	257
400 / 355	475	280
500 / 355	475	330
630 / 355	475	395
800 / 355	475	480
1000/355	475	580
1250/355	475	705

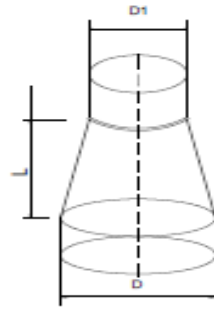
DD1 (mm)	L (mm)	H (mm)
400 / 400	520	280
500 / 400	520	330
630 / 400	520	395
800 / 400	520	480
1000/400	520	580
1250/400	520	705
500 / 500	620	330
630 / 500	620	395
800 / 500	620	480
1000/500	620	580
1250/500	620	705
630 / 630	750	395
800 / 630	750	480
1 000 / 630	750	580
1250/360	750	580
800 / 800	920	480
1000/800	920	580
1250/800	920	705
1000/1000	1170	730
1250/1000	1170	730
1250/1250	1420	730

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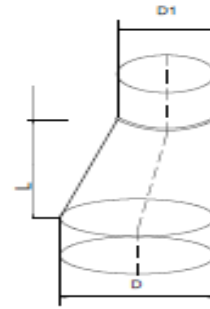
REDUCER



TYPE A (CONCENTRIC)



TYPE B (CONCENTRIC)



TYPE C (ECCENTRIC)

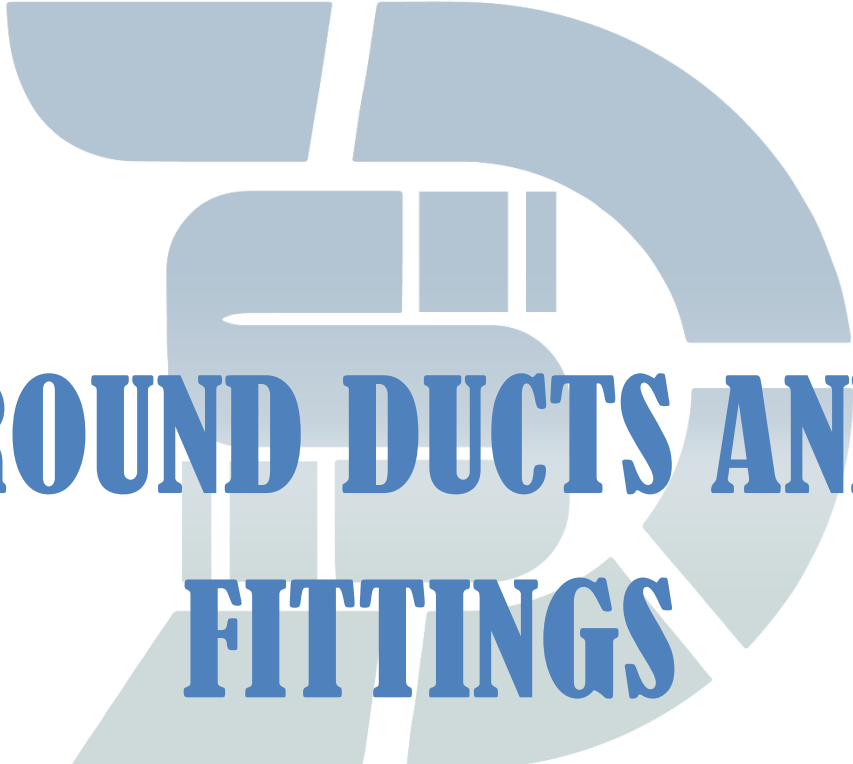
L (mm)	D/D1 (mm)
65	100/80
70	125/100
80	160/125
110	160/100
90	200/160
130	200/125
160	200/100
100	250/200
145	250/160
190	250/125
220	250/100
115	315/250
175	315/200
225	315/160
140	400/315
220	400/250
280	400/200
160	500/400
260	500/315
340	500/250
195	630/500
315	630/400
415	630/315
245	800/630
400	800/500
515	800/400
280	1000/800
480	1000/630
635	1000/500
340	1250/100
575	1250/800
780	1250/630

L (mm)	D/D1 (mm)
150	355/315
130	355/250
180	355/200
95	400/355
115	400/315
170	400/250
215	400/200
125	500/400
135	500/355
200	500/315
255	500/250
155	630/500
240	630/400
300	630/355
315	630/315
185	800/630
300	800/500
385	800/400
215	1000/800
475	1000/500
255	1250/100
430	1250/800
575	1250/630

L (mm)	D/D1 (mm)
18	80/63
20	100/80
31	100/63
22	125/100
35	125/80
39	160/125
43	160/100
45	160/80
32	200/160
52	200/125
65	200/100
39	250/200
61	250/160
80	250/125
96	250/100
44	315/250
72	315/200
95	315/160

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ROUND DUCTS AND FITTINGS

Sara International Factory
For Air Conditioning Duct

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LONGITUDINAL SEAM ROUND

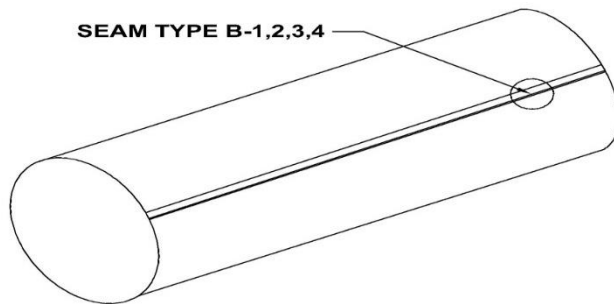
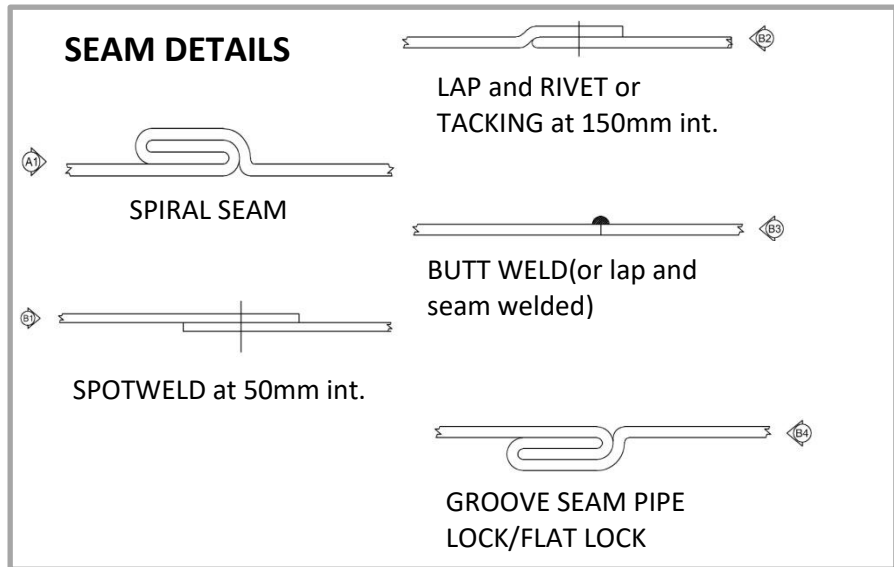


STRAIGHT DUCT

1. Thickness
0.4 mm thk up to 3mm thk
2. Standard straight length 1.2 Meters..

CONSTRUCTION TYPES

- Plain end or flange
- Painted /Epoxy coating
- Black mild steel
- Stainless Steel
- Aluminum



LONGITUDINALLY SEAMED ROUND STRAIGHT DUCT
Available at any diameter requirements

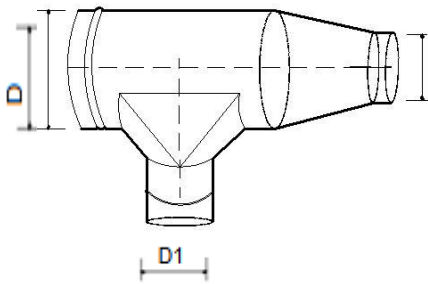
POSITIVE		NEGATIVE	
PRESS CLASS	SEAM TYPE	PRESS CLASS	SEAM TYPE
To + 10" w.g.	A1,B3,B4	To - 2" w.g.	A1,B1,B2,B3,B4
To + 3" w.g.	A1,B1,B2,B3,B4	To - 1" w.g.	A1,B1,B2,B3,B4
To + 2" w.g.	A1,B1,B2,B3,B4		



TEE & CROSS

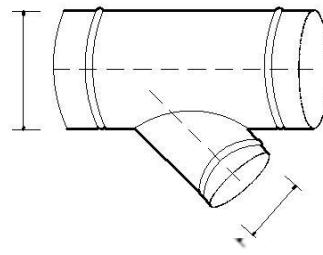


REDUCING TEE



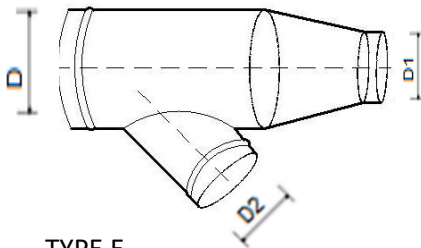
TYPE C (REDUCING)

LATERAL TEE



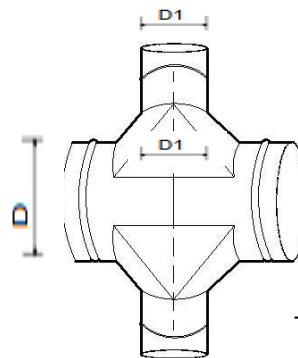
TYPE D (LATERAL)

REDUCING LATERAL TEE



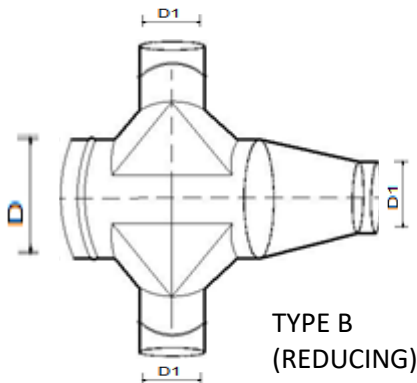
TYPE E
(REDUCING LATERAL)

CROSS



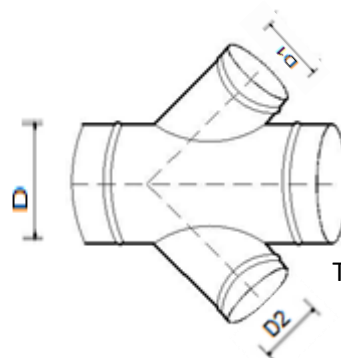
TYPE A

REDUCING CROSS



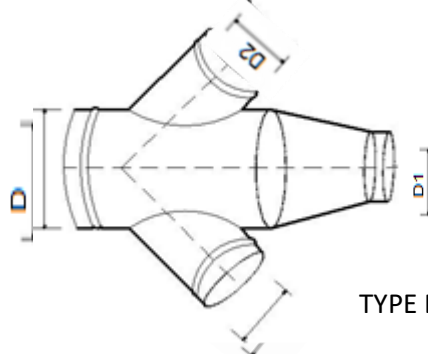
TYPE B
(REDUCING)

LATERAL CROSS



TYPE C (LATERAL)

LATERAL REDUCING CROSS



TYPE D (REDUCING LATERAL)

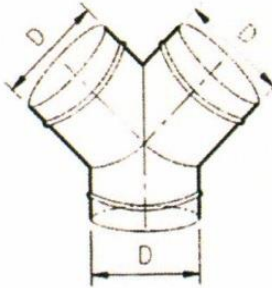
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OTHER FITTINGS

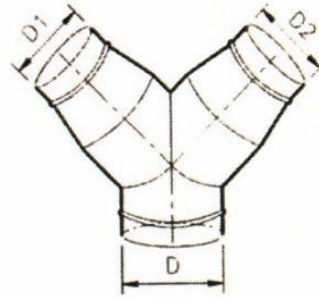


TWIN BEND 90° OR 45°



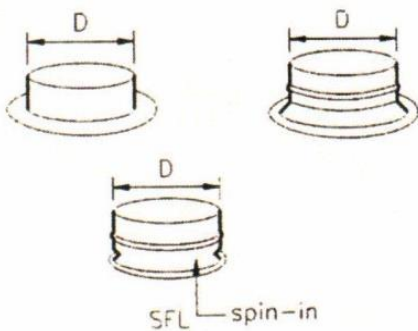
TYPE A

REDUCING TWIN BEND 90° OR 45°

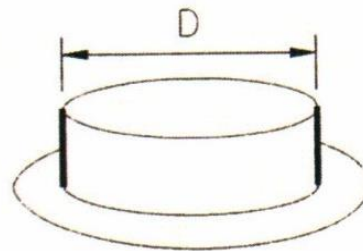


TYPE B (REDUCING)

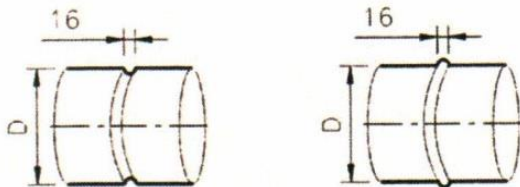
TAKE-OFF / SPIN-IN FITTING



END CAP



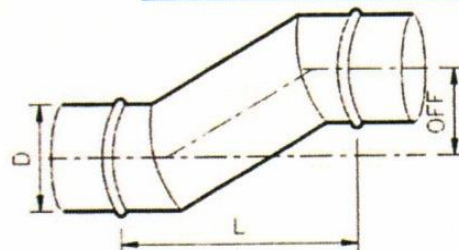
COUPLING



TYPE A

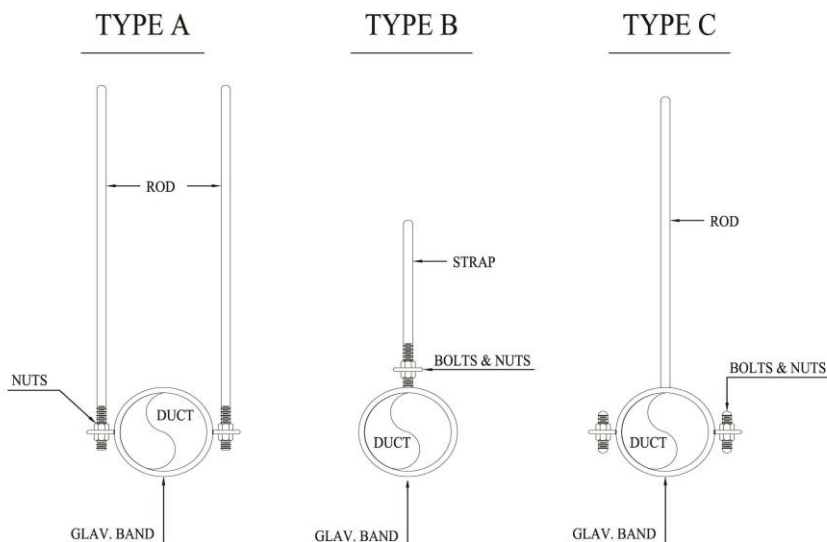
TYPE B

OFFSET 45° OR 60



ROUND DUCTS & FITTINGS

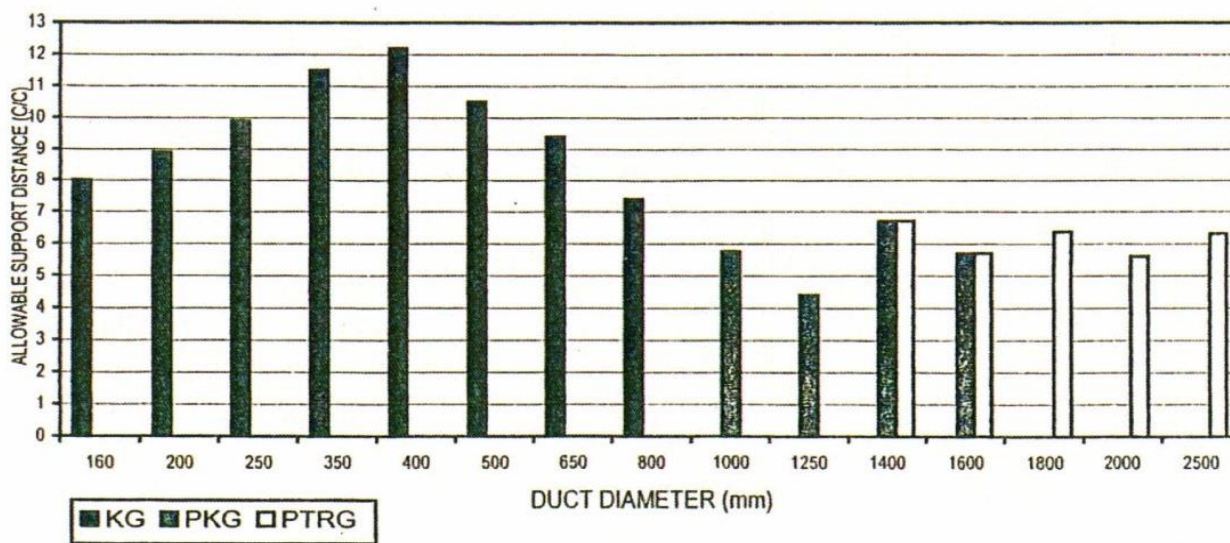
SUPPORTS AND HANGERS



ROUND DUCT SUPPORTS & HANGERS

MAXIMUM DUCT DIAMETER	SUPPORT		HANGER		
	TYPE A 7 C (mm)	TYPE B (mm)	ROD		STRAP
			TYPE A 2 RODS DIA (mm)	TYPE C 1 ROD DIA (mm)	TYPE B (mm)
305	30 x 3	30 x 2	8	8	30 x 1.2
813	30 x 4	N/A	8	10	N/A
1000	30 x 5	N/A	10	12	N/A

ALLOWABLE SUPPORT DISTANCE (C/C) OF PRIMARY SUPPORTS



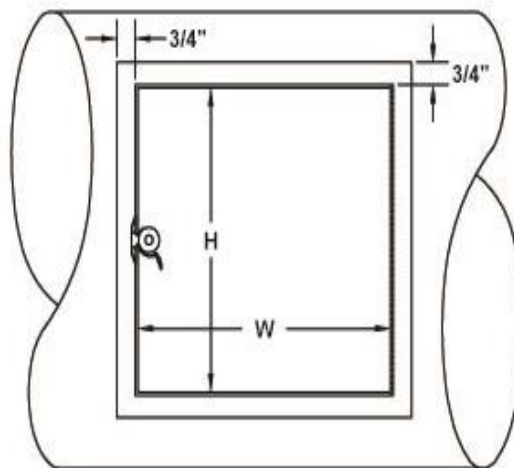
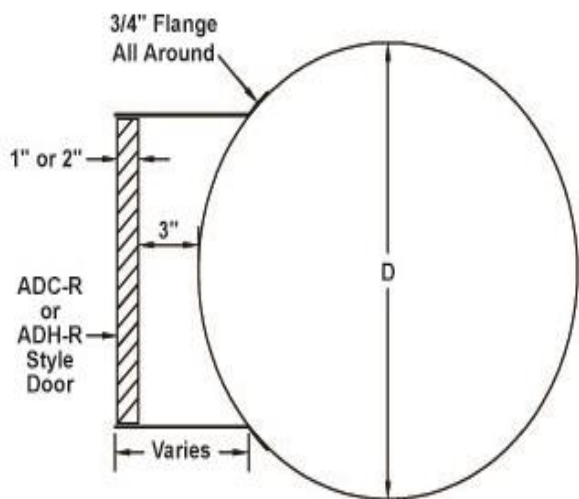
ROUND DUCTS AND FITTINGS

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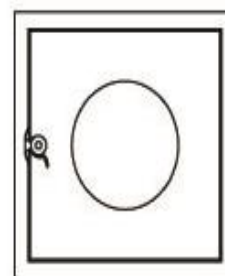
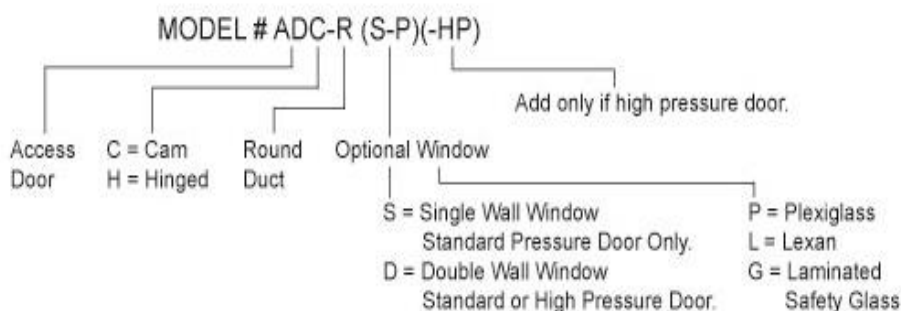


ROUND DUCTS & FITTINGS

ACCESS DOOR



ADH-R SHOWN ABOVE



SHOWN WITH OPTIONAL WINDOW

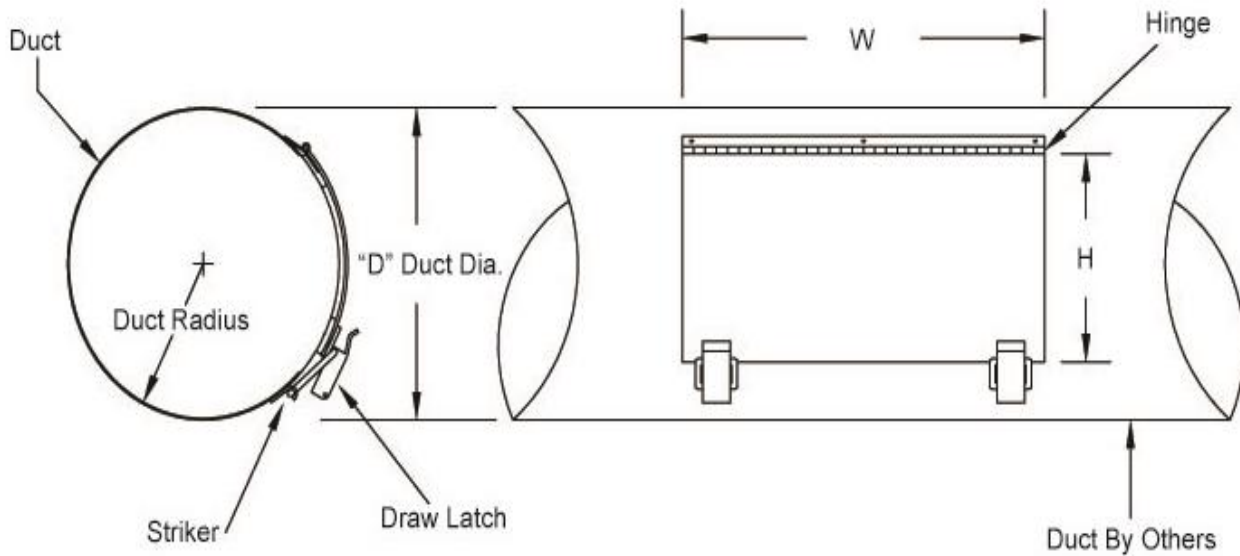
SPECIFICATIONS: 18 ga. galvanized steel - all welded construction. Door is double wall, insulated, of 24 ga. galvanized having cams and hinge, or double cams. Insulation is 1" or 2" fiberglass. (Double wall look thru doors are insulated on door sizes 12" x 12" and larger.) Window sizes 2-3/4" diameter on 6" x 6", 4-3/4" diameter on 8" x 8" and 10" x 10", 6-3/4" diameter on 12" x 12" and larger doors. Standard pressure units rated to 4-1/2" W.G.. High pressure units rated to 10" W.G..

OPTIONAL CONSTRUCTION: Aluminum with plated steel cams. Stainless steel with stainless steel cams.

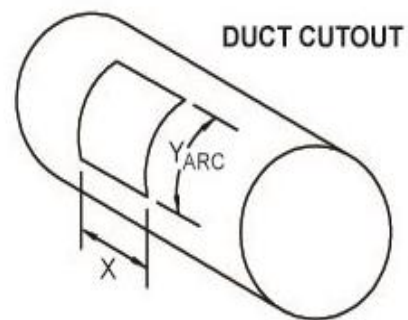
OTHER OPTIONS: • Chain (ADC only) • Cylinder cam lock (1" - ADH only) • Hasp (ADH only) • Padlock eyes (AD-H only)

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QTY.	DUCT DIA. "D"	W	H	CUT-OUT SIZE	
				X	Y ARC
	4"	8"	4-1/2"	6"	3-1/8"
	5"	8"	4-5/8"	6"	3-1/8"
	6"	9"	5-5/8"	7"	4-5/16"
	7"	10"	6-9/16"	8"	5-17/32"
	8"	11"	7-9/16"	9"	6-25/32"
	9"	12"	8-1/2"	10"	8-1/32"
	10"	13"	9-1/2"	11"	9-5/16"
	12"	15"	10-9/16"	13"	10-5/32"
	14"	17"	12-9/16"	15"	12-21/32"
	16"	17"	12-11/16"	15"	12-1/16"
	18"	19"	14-5/8"	17"	14-15/32"
	20"	19"	16-5/8"	17"	16-15/16"
	24"	19"	16-3/4"	17"	16-3/32"
	26"	21"	17-3/4"	19"	17"
	28"	21"	18-3/8"	19"	17-1/2"
	30"	24"	22"	22"	22"
	32"	24"	22-1/4"	22"	22"
	34"	24"	22-1/2"	22"	22"
	36"	24"	22-11/16"	22"	22"



FEATURES:

- Pressures to 6" W.G.. (Pressure tested on spiral duct with .090" high ribs and smooth duct.)
- 16 GA. galvanized access door
- Steel, plated "piano" style hinge, pre-punched for attachment
- Zinc plated steel draw latch and keeper
- 1/4" closed cell neoprene gasketing on four sides
- Other sizes available
- Optional all 304 stainless steel construction
- Optional aluminum construction with plated steel latches

NOTE: W x H is door size, not duct cutout size.

DOUBLE WALL ROUND DUCTS AND FITTINGS

Sara International Factory
For Air Conditioning Duct

AN ISO 9001: 2015 CERTIFIED COMPANY



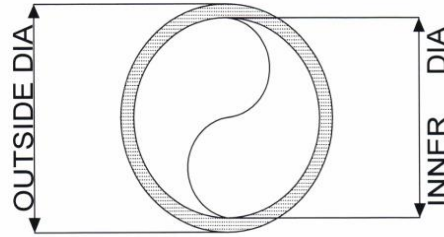
DOUBLE WALL ROUND DUCTS & FITTINGS



STANDARD SIZES

Acoustical double wall duct

- ◆ Outer shell: Solid Galvanized Steel
- ◆ Inner shell: Perforated Galvanized Steel



STANDARD SIZES (INSULATION THICKNESS 25 MM)					
DIAMETER	(mm)	SPIRAL DUCT		FITTINGS	
		INNER SHELL	OUTER SHELL	INNER	OUTER
INNER	OUTER	GAUGE	GAUGE	GAUGE	GAUGE
100	152	0.4	0.4	0.5	0.5
125	180	0.4	0.4	0.5	0.5
140	180	0.4	0.4	0.5	0.5
160	200	0.4	0.4	0.5	0.5
180	224	0.4	0.4	0.5	0.6
200	250	0.4	0.4	0.6	0.6
224	280	0.5	0.5	0.6	0.6
250	305	0.5	0.5	0.6	0.6
305	355	0.5	0.5	0.6	0.6
350	400	0.5	0.5	0.6	0.7
400	450	0.5	0.5	0.7	0.7
450	500	0.5	0.5	0.7	0.7
500	550	0.5	0.5	0.7	0.7
560	600	0.5	0.5	0.7	0.7
630	680	0.5	0.6	0.7	0.7
710	750	0.6	0.6	0.8	0.8
800	850	0.6	0.6	0.8	0.8
900	950	0.6	0.7	0.8	0.8
1000	1062	0.7	0.7	0.8	0.9
1120	1187	0.7	0.7	0.9	0.9
1250	1300	0.7	0.8	0.9	1.0

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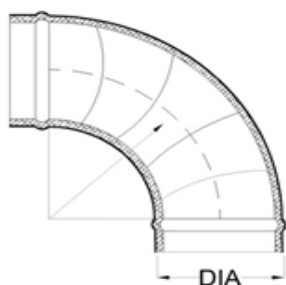


DOUBLE WALL ROUND DUCTS & FITTINGS

INSULATED FITTINGS



INSULATED ELBOW



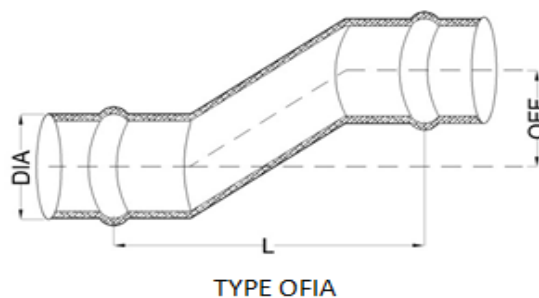
TYPES:

REIA-5 GORES 90°

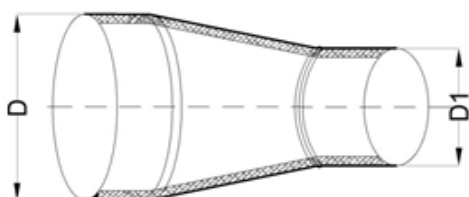
REIB-4 GORES 45°

REIC-2 GORES 15°, 30°, 60°

INSULATED OFFSET

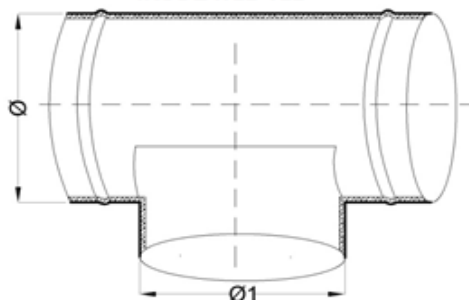


INSULATED REDUCER



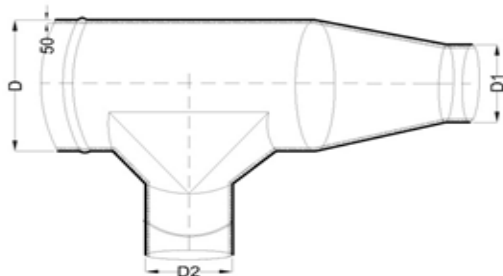
TYPE:
RRIA-CONCENTRIC
RRIB-ENCENTRIC

INSULATED TEE



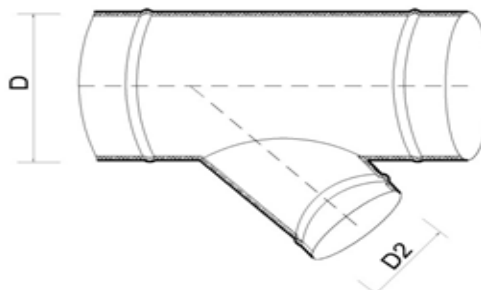
TYPES:
RTIA-CONCENTRIC
RTIB-ENCENTRIC

INSULATED REDUCING TEE



TYPE RRTIA (REDUCING)

INSULATED LATERAL TEE



TYPE RLTA (LATERAL)

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FIRE RATED
DUCTS & FITTINGS
Sara International Factory
For Air Conditioning Duct

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SARA FIRE RATED DUCTS AND FITTINGS

INTRODUCTION

FLAMEBARBW11 is a specially formulated water based compound containing selected mineral fillers in a low permeability elastomeric binder. Its Fire Proofing properties are used to provide enhanced performance of the **FLAMEBAR** System.

Physical Properties

Description	Single pack co-polymer emulsion containing a special function aggregate system.
Finish	Monolithic spray texture.
Colour	Natural Buff.
Cure	By air drying.
Flash Point	None, water based.
Thinner	Supplied ready to use, do not thin without reference to Fire spray International Limited.
Cleaner	Water - preferably warm, as soon as possible.
Total Solids	46% by Weight, 65% by Volume
Weight/liter	1.4Kg
Ph Value	Mildly alkaline pH 9 approximately.
Number of Coats	One or more as required.
Measured Dry Film Thickness (DFT)	0.7mm
Theoretical Coverage	1.5 Kg/m ² for 0.7mmDFT
Practical Coverage	Normally 1.8 to 2.2 Kg/m ² for 0.7mmDFT
Water Vapour Transmission	0.86 g/m ² 24 hours at 0.8mmDFT
Shelf Life	12months

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Container Size 28 Kg plastic drums or 35 Kg steel kegs **Spread of Flame**

Class 1 to BS 476 Part 7 on non-combustible substrates.

Fire Propagation Low index and sub-index readings to BS 476 Part 6 over non-combustible substrates. The combination of **BS 476 Parts 6 & 7** testing gives **FLAMEBAR BW11** a **Class 'O'** rating.

Chemical Resistance

Samples of SARA BW11 have been tested in:

Standard 10% solutions of the following acids: Hydrochloric, Nitric and Sulphuric

Standard 10% solutions of the following alkalis: Sodium Hydroxide and Potassium hydroxide

The following solvents:

After 10 days total immersion all the above chemicals failed to cause a breakdown of the **FLAMEBAR BW11** Structure.

Steel Surface Preparation

The steel surface shall be inspected prior to application to ensure that it is suitable for the application and adhesion of **FLAMEBAR BW11**

Example, the steel surface must be free from loose materials, dust deposits etc. bare steel surfaces should be treated with a suitable alkali resistant primer.

The surface must be degreased and dried prior to applications of **FLAMEBAR BW11**

Application

Stir contents before use do not thin

Methods of Application

Industrial spray, trowel (small areas only)

Equipment

FLAMEBAR BW11 is applied by industrial heavy material spray equipment

Limitations During Application

FLAMEBAR BW11 is suitable for most interior and semi exposed areas, but it is not recommended for use

In areas where it will be fully exposed to exterior weather conditions

- Maximum air and surface temperature 50°C
- Maximum air and surface temperature 4°C and falling (application is permissible where air and surface temperature is at least 2°C and rising)
- Air and surface temperature to be at least 2°C above dew point temperatures

Health & Safety Precautions

Provided that the correct standards of hygiene are maintained and safe working Practice followed, there are no known hazards in the handling of **FLAMEBAR** BW11 Recommended safety precautions to follow are:

- (a) Avoid skin and eye contact and inhalation of spray mist. Wearing of gloves, goggles, face Mask and barrier cream recommended
- (b) Provide good ventilation
- (c) If product comes into contact with the skin, was with lukewarm water and soap or a proprietary hand cleanser
- (d) If the eyes become contaminated, was with plenty of clean water and seek medical attention if irritation persists.
- (e) If swallowed, rinse mouth and throat with water, dilute stomach contents with water obtain medical aid
- (f) Where spillage occurs, cover the **FLAMEBAR** BW11 with an absorbent materials, E.g. dry sand, and dispose of it carefully, ensuring that contamination of water course, sewers or soil does not occur.
- (g) Smoking should be prohibited in the work place



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FIRE RATED DUCTS & FITTINGS

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VOLUME CONTROL DAMPER & BDD

Sara International Factory
For Air Conditioning Duct

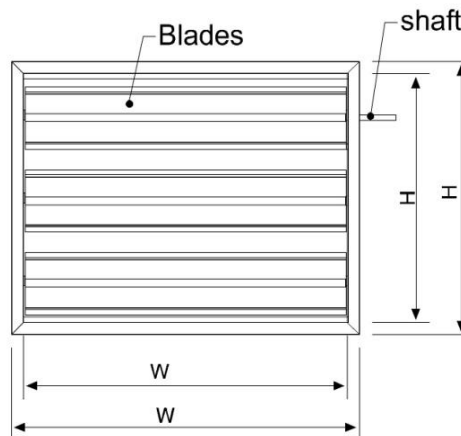
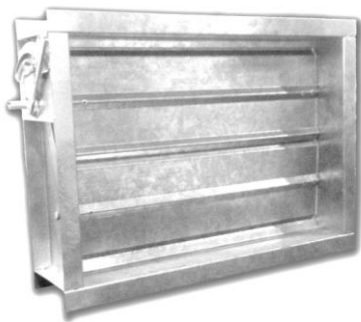
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FLANGE TYPE (SARA-VDF)



VDF SECTION DETAILS

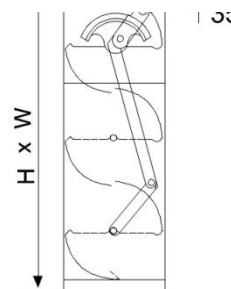
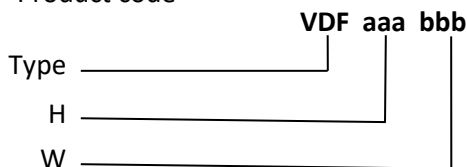


DESCRIPTION

Volume control damper are designed to suit client individual requirements, maintain and safe air flow level in ventilation system.

Ordering

Product code



Opposite Blade

SPECIFICATION

- Parallel volume control damper
- Opposed volume control damper

Frame: Manufactured from galvanized formed steel channel G90 100mmx35x1.2mm (18Ga)

Blades: Galvanized steel (1.0mm) (20 Ga)

Bushings: Self oiling bronze bushings 12.7mm diameter

Bearing Pin: Plated steel rod 12.7mm diameter

VDF Available – Parallel or opposed blasé
 - Manual Quadrant or motorized

Damper up to 305mm high are single blade construction otherwise will be multiblade damper

Damper size 1200x1200mm is manufactured as single section bigger sizes will be multiple sections

W mm	H mm	Number of Blades
100	100	1
150	150	1
200	200	1
250	250	1
300	300	1
350	350	2
400	400	2
450	450	2
500	500	3
550	600	3
600	700	4
650	800	4
700	900	5
750	1000	5
800	1100	6
850	1200	7
900	1300	7
950	1400	8
1000	1500	9
1050	1600	9
1100	1700	10
1200	1800	12



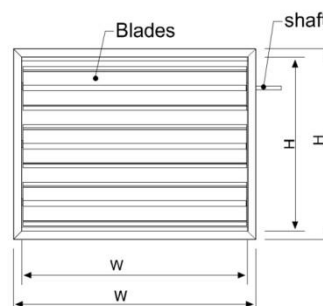
SLEEVE TYPE (SARA-VDS)



VDS



SECTION DETAILS

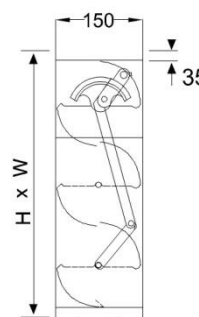
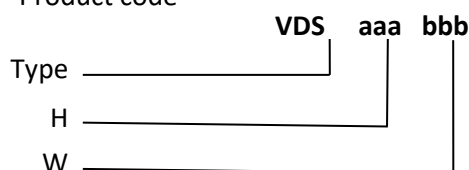


DESCRIPTION

Volume control damper are designed to suit client individual requirements, maintain and safe air flow level in ventilation system.

Ordering

Product code



SPECIFICATION

- Parallel volume control damper
- Opposed volume control damper

Frame: Manufactured from galvanized formed steel channel G90 100mmx35x1.5mm (16Ga)

Blades: Galvanized steel (1.2mm) (18 Ga)

Bushings: Self oiling bronze bushings 12.7mm diameter

Bearing Pin: Plated steel rod 12.7mm diameter

VDF Available – Parallel or opposed blasé
 - Manual Quadrant or motorized

Damper up to 305mm high are single blade construction otherwise will be multiblade damper

Damper size 1200x1200mm is manufactured as single section bigger sizes will be multiple sections

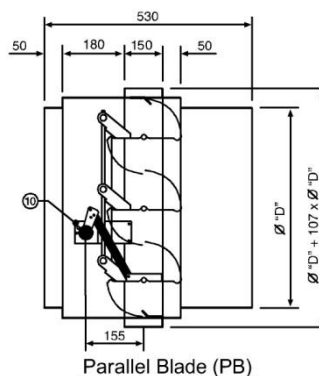
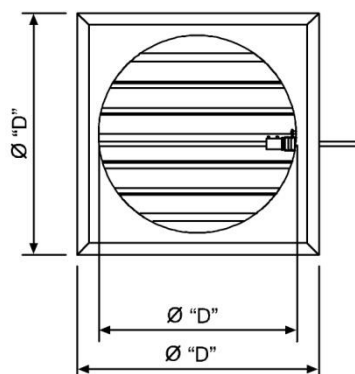
W in mm	H in mm	Number of Blades
100	100	1
150	150	1
200	200	1
250	250	1
300	300	1
350	350	2
400	400	2
450	450	2
500	500	3
550	600	3
600	700	4
650	800	4
700	900	5
750	1000	5
800	1100	6
850	1200	7
900	1300	7
950	1400	8
1000	1500	9
1050	1600	9



ROUND SPIGOT DAMPER (SARA-RSD)



SECTION DETAILS

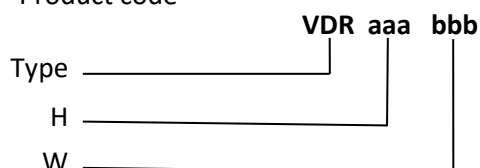


SPECIFICATION

Volume control damper are designed to suit client individual requirements, maintain and safe air flow level in vent

Ordering

Product code



SPECIFICATION

- Parallel volume control damper
- Opposed volume control damper

Frame: Manufactured from galvanized formed steel channel G90 100mmx35x1.5mm (16Ga)

Blades: Galvanized steel (1.2mm) (18 Ga)

Bushings: Self oiling bronze bushings 12.7mm diameter

Bearing Pin: Plated steel rod 12.7mm diameter

- VDF Available – Parallel or opposed blasé
- Manual Quadrant or motorized

Damper up to 305mm high are single blade construction otherwise will be multiplied damper

Damper size 1200x1200mm is manufactured as single section bigger sizes will be multiple sections

PRODUCT OPTION STAINLES STEEL

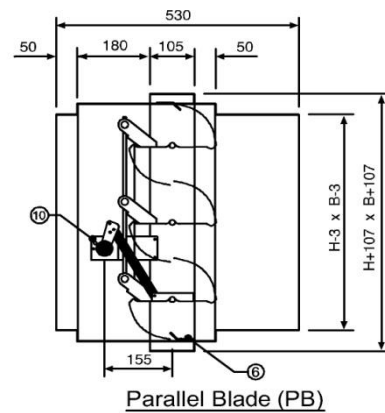
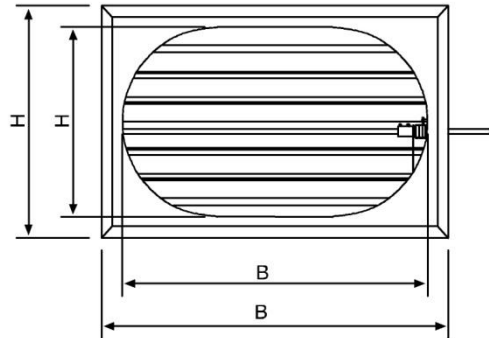
W in mm	H in mm	Number of Blades
550	550	3
600	600	4
650	650	4
700	700	5
750	750	5
800	800	6
850	850	7
900	900	7
950		
1000		
1050		
1100		
1200		



OVAL SPIGOT DAMPER (SARA-OSD)



SECTION DETAILS

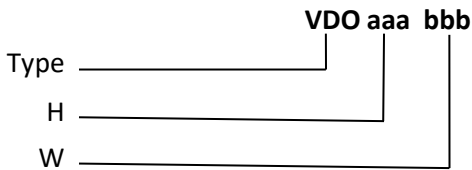


DESCRIPTION

Volume control damper are designed to suit client individual requirements, maintain and safe air flow level in ventilation system.

Ordering

Product code



SPECIFICATION

- Parallel volume control damper
- Opposed volume control damper

Frame: Manufactured from galvanized formed steel channel G90 100mmx35x1.5mm (16Ga)

Blades: Galvanized steel (1.2mm) (18 Ga)

Bushings: Self oiling bronze bushings 12.7mm diameter

Bearing Pin: Plated steel rod 12.7mm diameter

- VDF Available – Parallel or opposed blasé
- Manual Quadrant or motorized

Damper up to 305mm high are single blade construction otherwise will be multiplied damper

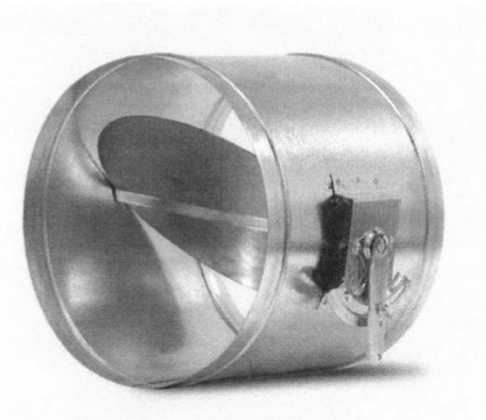
Damper size 1200x1200mm is manufactured as single section bigger sizes will be multiple sections

W in mm	H in mm	Number of Blades
100	100	1
150	150	1
200	200	1
250	250	1
300	300	1
350	350	2
400	400	2
450	450	3
500	500	3
550	600	3
600	700	4
650	800	4
700	900	5
750	1000	5
800	1100	6
850	1200	7
900	1250	7

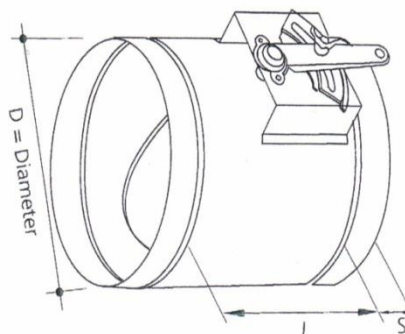


ROUND VOLUME CONTROL DAMPER

(SARA-RVCD)



SECTION DETAILS

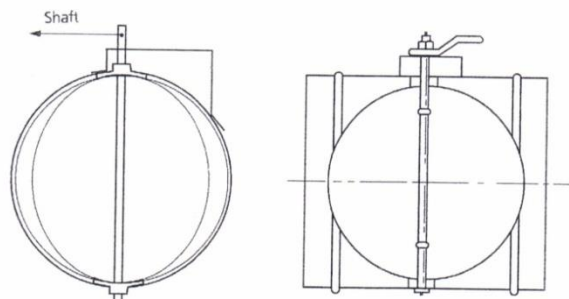
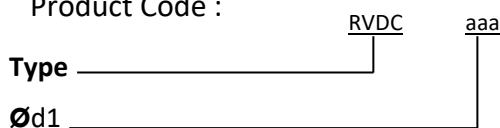


SPECIFICATION

- Housing-made of galvanized steel materials Ga.20
- Blade-made of galvanized steel material Ga.18
- Bearing pin-plated steel rod 12.7mm diameter
- Bushing-self oiling bronze bushing 12.7mm diameter
- Quadrant; locking quadrant with position indicator

Ordering

Product Code :



D	100	150	200	250	300	350	350	400	450	500	550	600
L	150	150	150	200	200	200	200	200	200	200	200	200

VOLUME CONTROL DAMPER

AN ISO 9001: 2015 CERTIFIED COMPANY

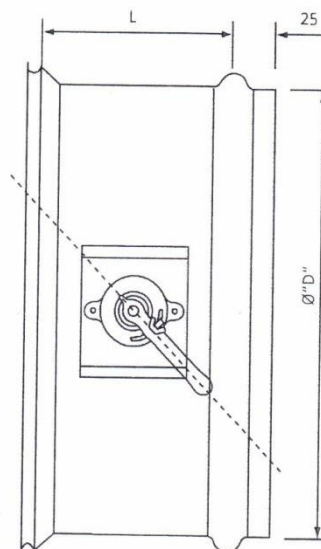


SPIN COLLAR DAMPER

(SARA-SCD)



DIMENSIONS



DESCRIPTION

Ordering

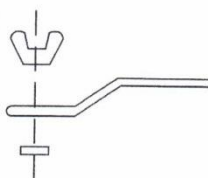
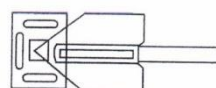
Product code



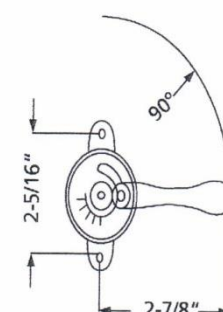
SPECIFICATION

Standard Materials & Construction

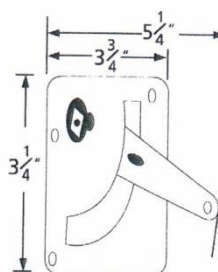
- Frame: 24 Gauge Galvanized Steel
- Blade: 20 Gauge Galvanized steel
- Operation: Hand quadrant fro manual operation with position indicator



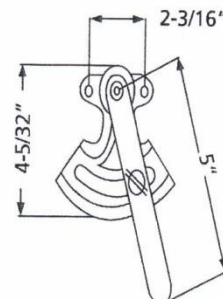
'RAPIT' REGULATOR
UP TO Ø 150mm



1/4" DIAL REGULATOR
SEATS & BEARING
UP TO Ø 200mm



3/8" WEDGELOC" REGULATOR
SEATS UP TO Ø 250mm



3/8" QUADRANT SETS
Ø300mm & above

D	100	150	200	250	300	350
L	200	200	200	250	300	350

VOLUME CONTROL DAMPER

AN ISO 9001: 2015 CERTIFIED COMPANY

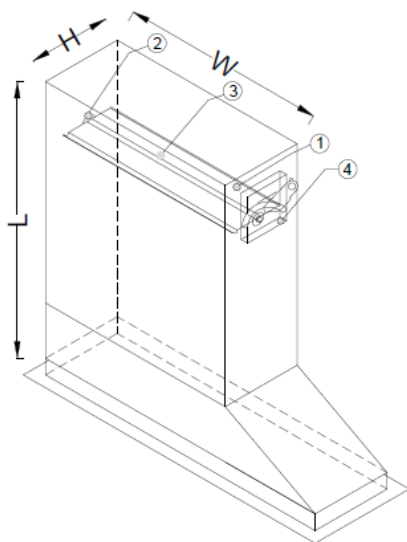


SARA VOLUME CONTROL DAMPER

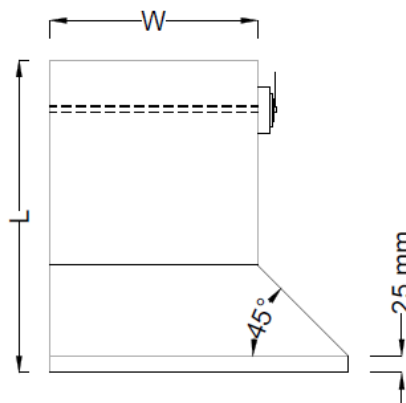
TAKE OFF WITH VCD



Parallel Blades



Vertical Mounting



- 1) BLADES:
Galvanized 1.20mm (18) galvanized steel
- 2) BUSHINGS:
Self Oiling Bronze Bush 12.70mm Diameter
- 3) BEARING PIN:
Plated steel rod 12.70mm
- 4) QUADRANT:
Manual Quadrant or Motorizes

Damper up to 305mm high are single blades construction. Otherwise will be multiplied damper.

Damper size 1200 x 1200 mm is manufactured as a single section bigger sizes will be multiple sections

Standard Sizes

- 500 x 100 – 300
- 500 x 100 – 350
- 500 x 100 – 400
- 500 x 150 – 300
- 600 x 100 – 300
- 600 x 100 – 350
- 600 x 100 – 400
- 600 x 150 – 300
- 600 x 150 – 350
- 600 x 150 – 400
- 600 x 150 – 450

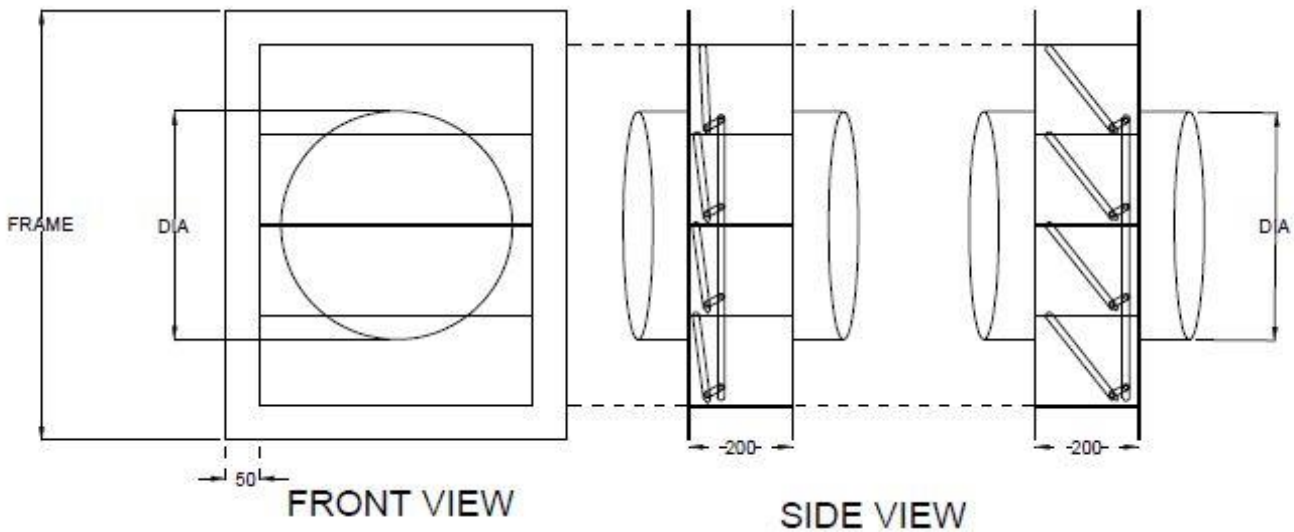
PRODUCT OPTION STAINLES STEEL

AN ISO 9001: 2015 CERTIFIED COMPANY



BACK DRAFT DAMPER SPIGOT TYPE

(SARA-BDDS)



STANDARD CONSTRUCTION

FRAME

Galvanized Steel (1.20mm or 1.50mm)

BLADES

Aluminum Construction (0.60, 0.70 & 0.80mm) Maximum Width 200mm SHAFT
12mm Plated Steel (High Pressure) 4mm Plated Steel (4mm Low Pressure)

Bushing

Low pressure (4mm Rod Rubber Bushing)

High Pressure (12mm Rod Brass Bushing)

Finish

Mill

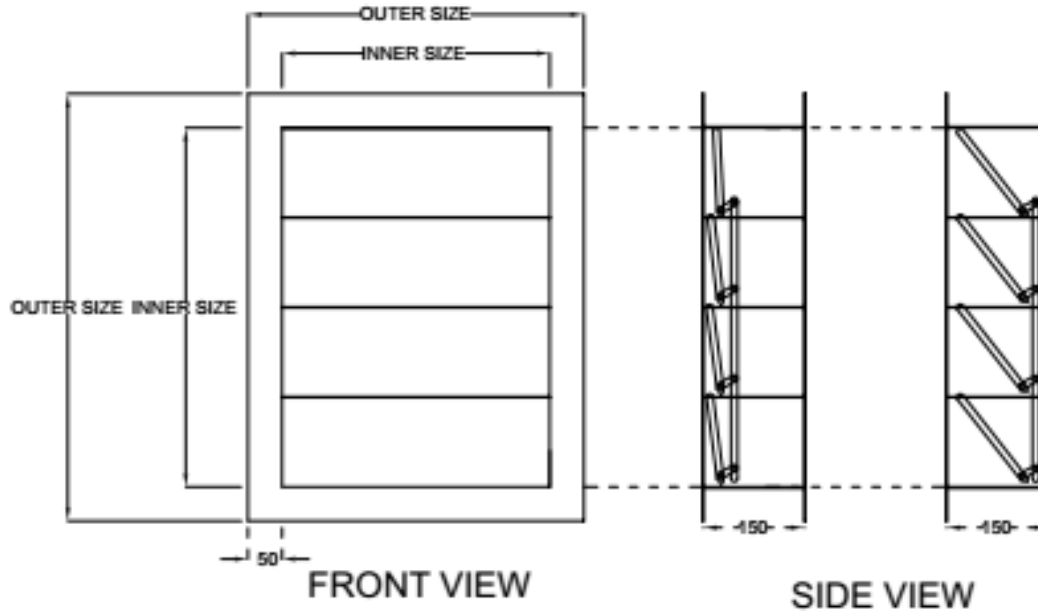
Mounting

Vertical & Horizontal

PRODUCT OPTION STAINLES STEEL

BACK DRAFT RECTANGULAR DAMPER

(SARA-BDD/R)



STANDARD CONSTRUCTION

FRAME

Galvanized Steel (1.20mm or 1.50mm)

SHAFT

12mm Plated Steel (High Pressure)

Bushing

Low pressure (4mm Rod Rubber Bushing)

High Pressure (12mm Rod Brass Bushing)

4mm Plated Steel (4mm Low Pressure)

BLADES

Extruded Aluminium Construction (0.60, 0.70 & 0.80mm) Maximum Width 200mm

Finish

Mill

Mounting

Vertical & Horizontal

AN ISO 9001: 2015 CERTIFIED COMPANY



SARA PLENUM BOX

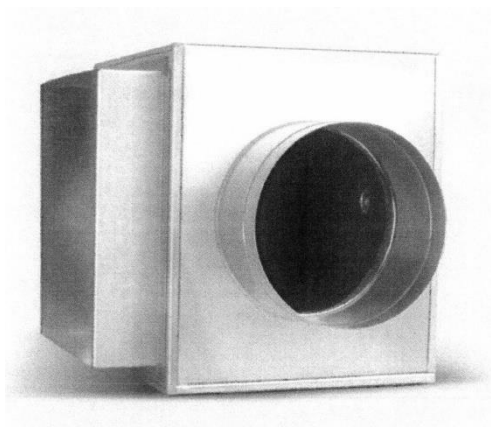
Sara International Factory
For Air Conditioning Duct

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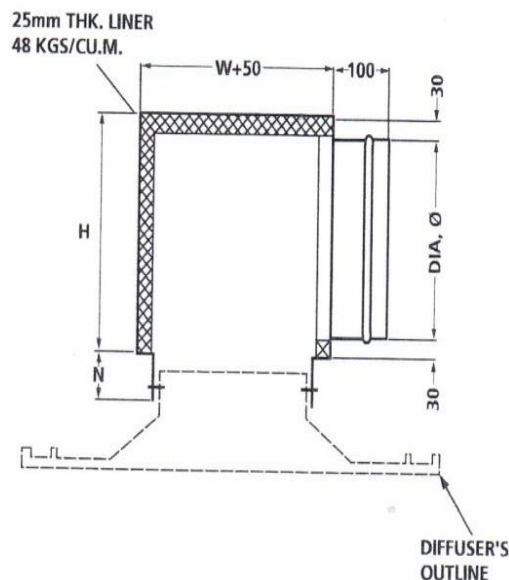


PLENUM BOX FOR SQUARE DIFFUSER

(SARA-PBS)



DIMENSIONS



DESCRIPTION

This spigot inlet can fix either on the top or on the side of the box depending on site requirements

H – Height (mm)

N – Neck length (70mm standard)

Ø – Diameter

S – Spigot length (S) 100mm without damper

- Box made of 24 Gage galvanized steel (G90)
- Dimensions H and W in is based on the grill diffuser neck size
- Standard liner – 48kg/m³ density x 25mm thickness.

Ordering

Product code

PBS aaa bbb

Type _____

H mm _____

W mm _____

AN ISO 9001: 2015 CERTIFIED COMPANY



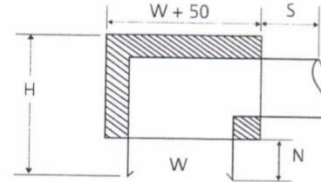
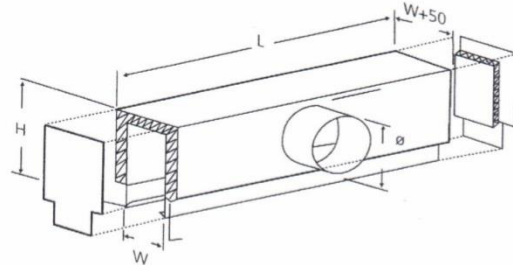
LINER PLENUM BOX

(SARA-LPB)

LPB



DIMENSIONS



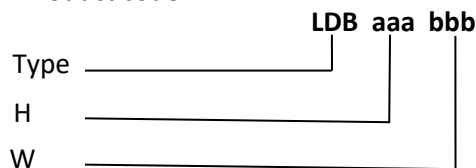
DESCRIPTION

- 24 ga Galvanized steel (G-90)
- Standard liner 48 Kg/m³ density x 25mm thickness
- H – Height (mm)
- L – Length (mm)
- N – Neck length (70 mm standard)
- Ø – Diameter
- S – Spigot length (s) 100mm without damper)
- l – Slot equal 4mm as a standard

- The spigot inlet can fix either on the top or on the side of the plenum box depending on site requirements
- Dimensions H and W is based on the grille/diffuser neck size

Ordering

Product code



AN ISO 9001: 2015 CERTIFIED COMPANY





Sara International Factory
For Air Conditioning Duct

AN ISO 9001: 2015 CERTIFIED COMPANY

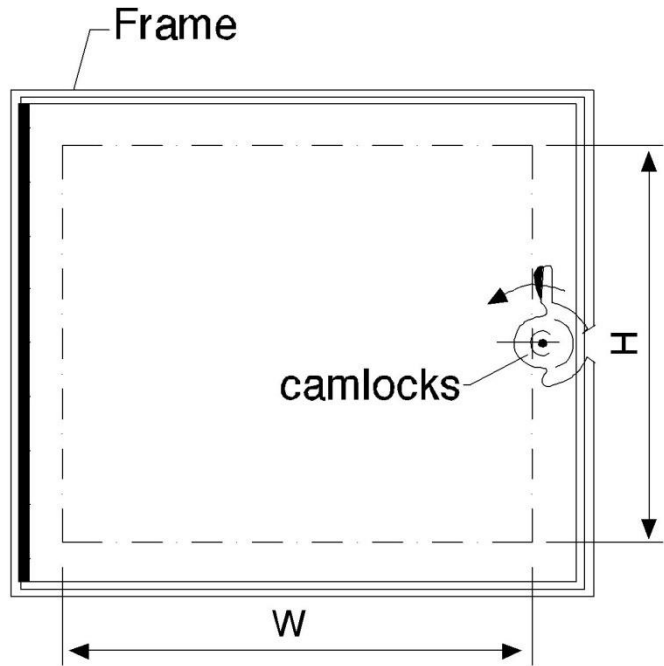


DUCT ACCESS DOOR

(SARA-AD)

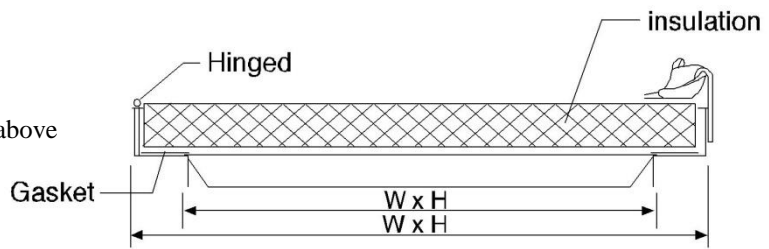


DIMENSION



DESCRIPTION

- 22 gauge galvanized steel frame
- 24 gauge galvanized steel double wall door
- 1" (25mm) thick fiber glass insulation
- Self-oiling hinges
- 20mm airoflex gasket
- Access door up to 350mm have one lock, above this size have two locks
- Cam lock is a standard
- Other locks are available upon request
- Minimum size is 6" W x 6" H (153x153)mm
- Minimum size is 24" W x 24" H (6093x609)mm



Ordering
Product code: DAD aaa bbb

Type _____

W mm _____

H mm _____

ACCESS DOOR

AN ISO 9001: 2015 CERTIFIED COMPANY



PRESSURE RELIEF ACCESS DOOR



APPLICATION

The PRD18 (positive) and the NRD18 (negative) pressure relief doors are designed to open automatically to prevent exploding or imploding ductwork in the event dampers close while the fan is still operating. The doors open outward (positive) or inward (negative) at a specified pressure setting relieving or supplying pressure within the duct to equalize the pressure.

The accurate pressure relief setting is factory set and tested in an AMCA approved lab prior to shipping.

STANDARD CONSTRUCTION

FRAME

12 gage (2.8) galvanized steel, Z-shape.

DOOR

12 gage (2.8) galvanized steel.

FLANGE

1" (25) around full perimeter.

SEAL

Polyurethane foam around door perimeter.

PRESSURE RELIEF SETTINGS

The PRD18 is available for relief pressures from 2" (.50 kPa) to 10" (2.49 kPa) w.g. while the NRD18 is available for relief pressures from +4" (+1kPa) to +10" (+2.49 kPa) w.g. Specify pressure desired for door operation. Set pressure must be at least 1" w.g. above normal system pressure.

(Consult factory for availability of other settings.)

SPRINGS

Negator type springs are used for door closure upon pressure relief and system shutdown. Pressure relief at low pressures may require manual door closure.

INSTALLATION

Cut openings $\frac{5}{16}$ " (16) larger than door size. Fasten door to duct with flange using fasteners appropriate for each application.

DOOR SIZE (w x h)

PRD18 • 18" x 18" (457 x 457)

24 x 10 (610 x 254)

24 x 12 (610 x 305).

NRD18 • 18" x 18" (457 x 457) only.

TEMPERATURE LIMITS

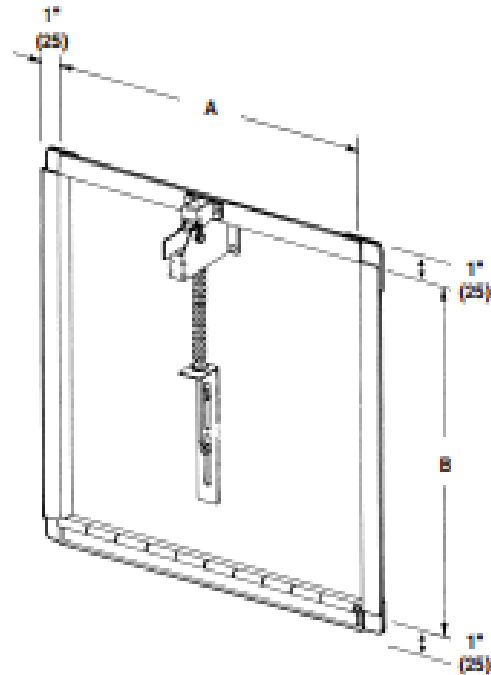
+40°F (+4°C) minimum and 120°F (49°C) maximum.

VARIATIONS

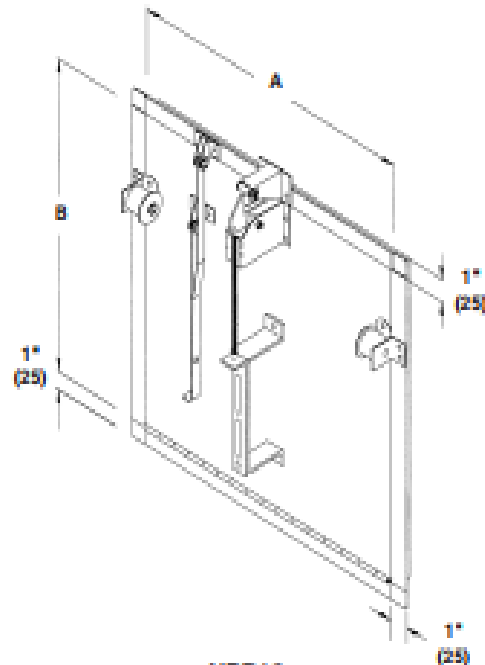
- Stainless steel construction.
- Heavier construction for high pressure

NOTES:

- (1) Door must be installed vertically and level for proper operation.
- (2) Pressure Relief Setting is not field adjustable.
- (3) Dimensions in parenthesis () indicate millimeters.



PRD18



NRD18

(18" x 18" [457 x 457] only)

