

ETERNITY

ELECTROMECHANICAL

PRODUCT CATALOG

RECTANGULAR DUCT & FITTINGS

Eternity Electromechanical

STRAIGHT DUCT



Description

Single wall rectangular duct and fittings are factory fabricated and supplied with factory applied sealant on all longitudinal joints for S & Drive slip ducts and additionally on transverse joints for all flanged end ducts and fittings.

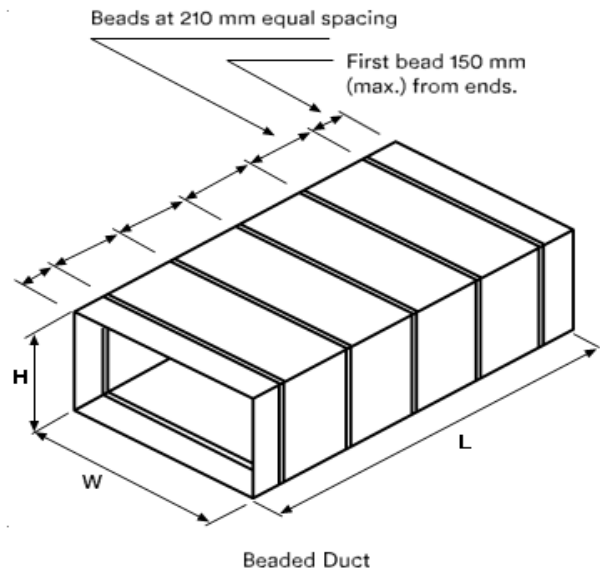
Rectangular ducts can be supplied in either fully assembled form or knocked down form for straight ducts (minimum requirement for assembly of straight ducts on site) while fittings will be delivered fully assembled with factory applied sealant.

Rectangular duct line can be supplied by Galvanized Steel (in accordance with ASTM 653, G90 coating)

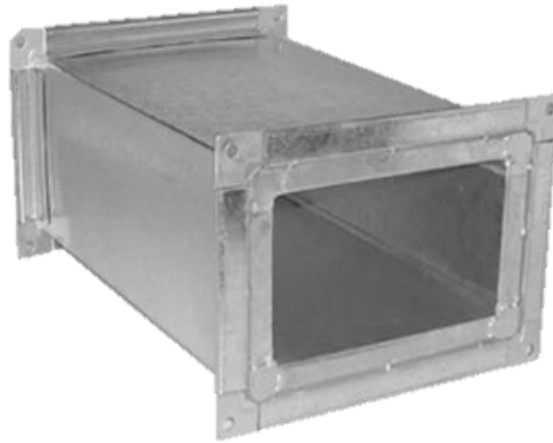
Dimensions

All straight ducts are beaded or cross broken (except if ducts are double wall, internally lined, or gauge 18 and heavier). All fittings are cross broken from size 483 mm and above, or beaded on all sizes.

Standard Duct Length: 1200 mm (4 feet)



LINED DUCTS



Description

Lined rectangular duct and fittings are available with an insulating liner faced with a strong, dimensionally stable black Woven Fiber Fabric (WGF) to protect against erosion and microbial growth. This acoustic/thermal liner can be used with air velocities up to 5,000 fpm.

Standard Duct Length: 1200 mm (4 feet)

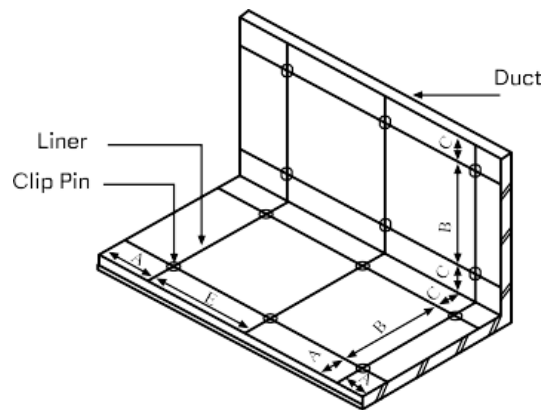
Standard Acoustic/Thermal Insulation:

25mm, 48 kg/m³, WGF facing. Other thicknesses and densities can be supplied on request.

Insulation Edge Coverings:

All insulation edges are covered by galvanized steel channels fixed to duct.

Dimensions



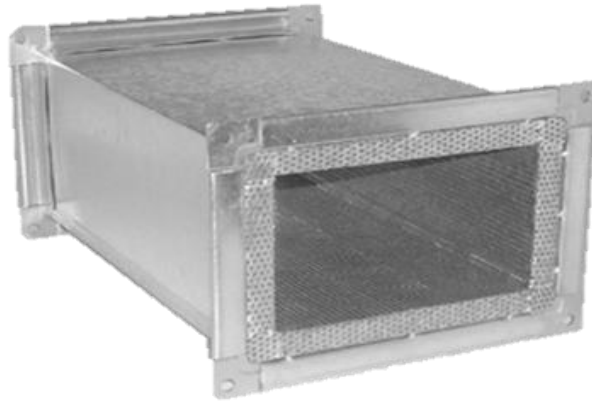
Velocity	Dimensions			
	A	B	C	E
2500 - 0 fpm	76	305	102	457
5000 - 2501 fpm	76	152	102	406

Liner bonded to duct with adhesive and welding pins at approximate centers as shown.

Liner to be 48 kg/m³ (3 lbs. /ft³) density, 25 mm thick, unless otherwise specified.



DOUBLE WALL ACOUSTIC DUCTS



Description

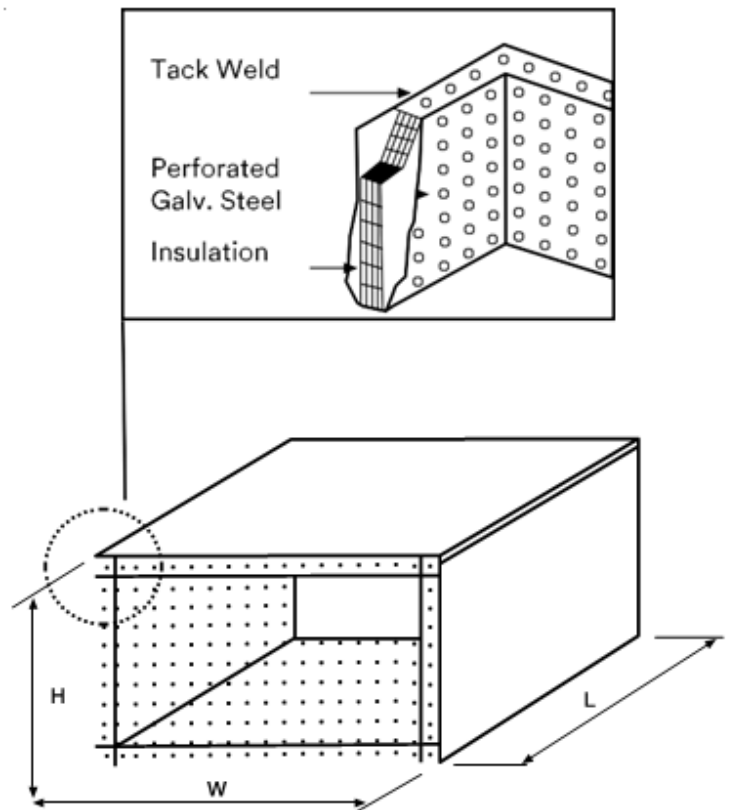
Double wall rectangular duct and fittings provide exceptional noise control in air distribution systems. This double wall, insulated ductwork is constructed of solid metal outer shell and perforated inner shell with a layer of acoustic insulation sandwiched in-between.

Our standard construction consists of: galvanized steel with a galvanized perforated inner wall and standard acoustic, thermal insulation of 25 mm thickness, 48 kg/m³ density with WGF facing fixed to duct.

Other types of insulation material, density & thickness are available. The outer shell can be supplied in galvanized steel, stainless steel, black steel, aluminum or painted steel while for the inner perforated shell only in galvanized steel or black steel.

Standard Duct Length: 1200 mm (4 feet)

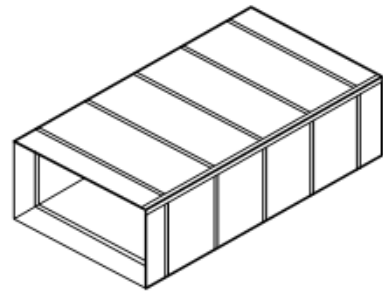
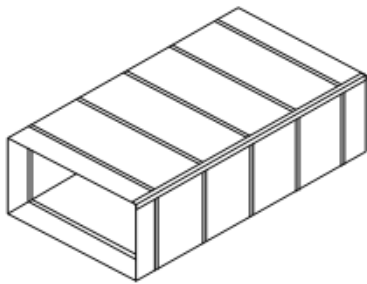
Dimensions



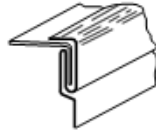
LONGITUDINAL SEAMS

Pittsburgh Lock

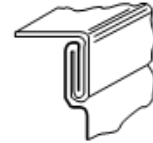
Double Corner Seam



*18 Gauge & Up



* Up to 20 Gauge



Seam Location



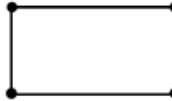
A



B



C



D



E

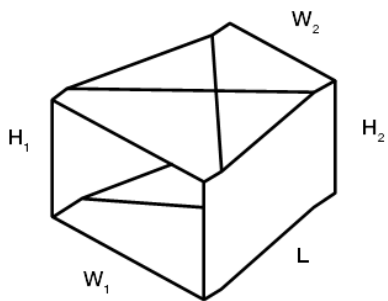
Seam Location

* Seam numbers and locations vary according to joint type and size.

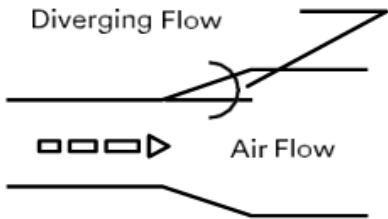
REDUCER



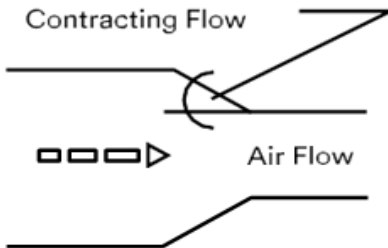
RADIUS BEND



20° Maximum on Diverging Flow

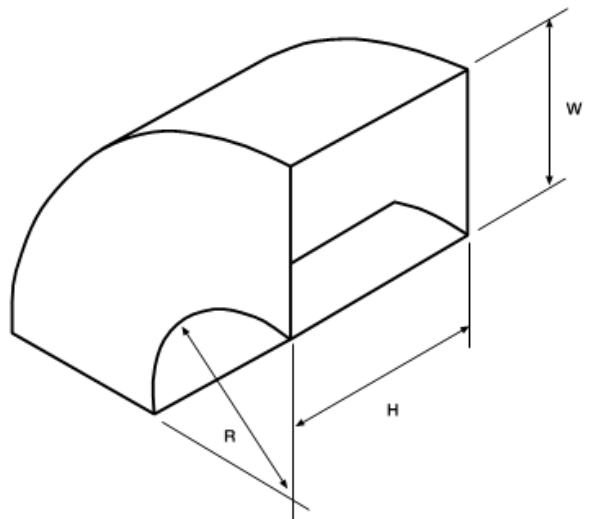


30° Maximum on Contracting Flow



Radius Bend without Splitter Vanes.

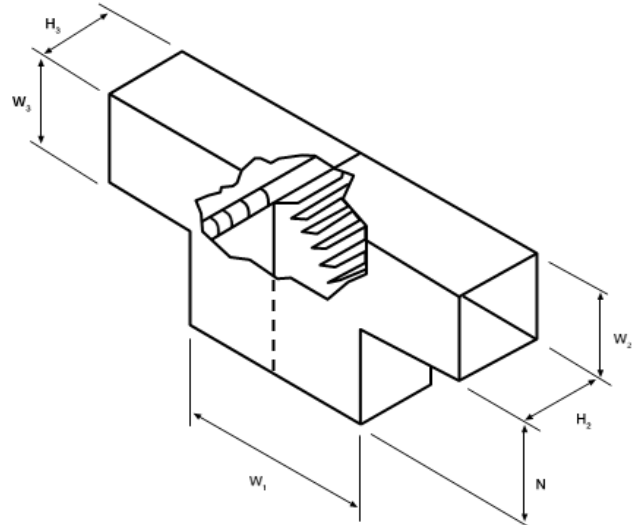
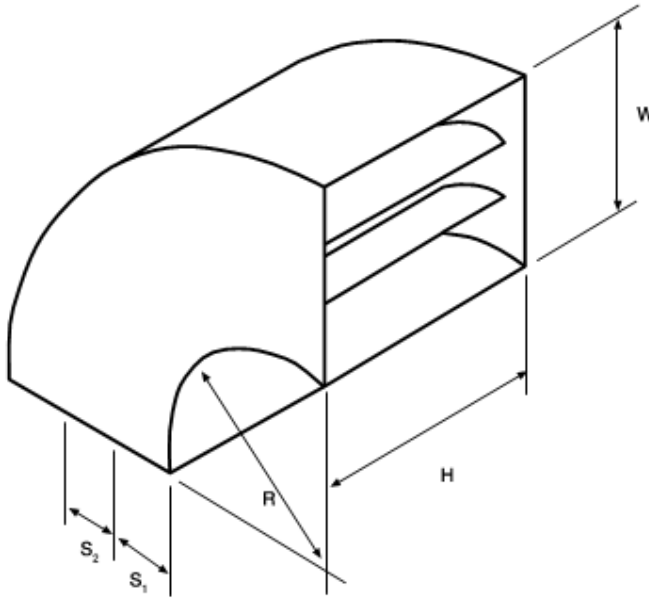
Where the throat radius is equal to width ($R = W$)



RADIUS BEND WITH SPLITTER VANES

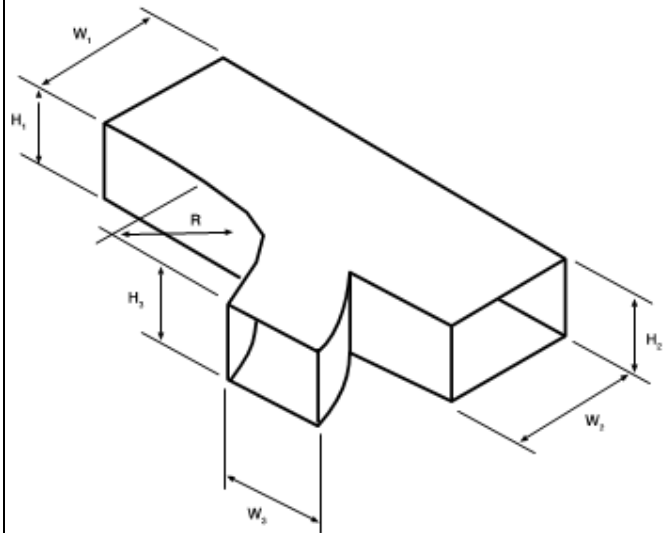
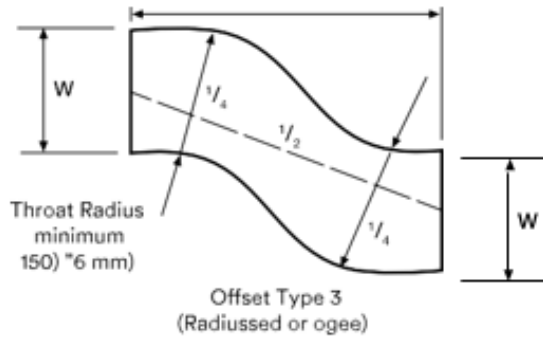
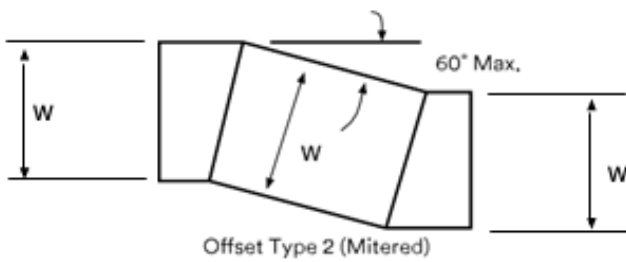
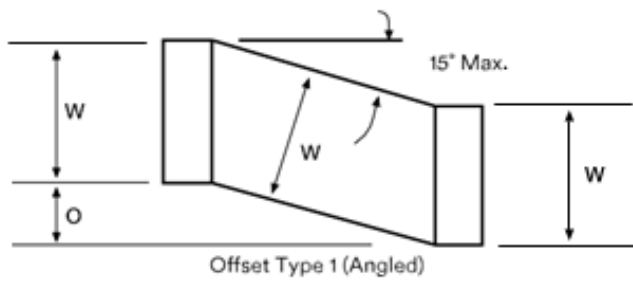
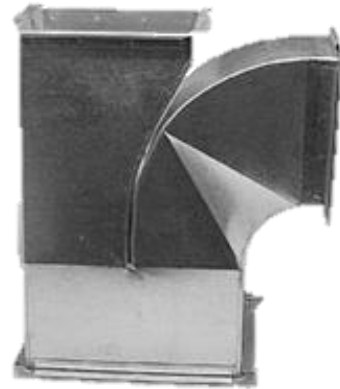


TEE



OFFSET

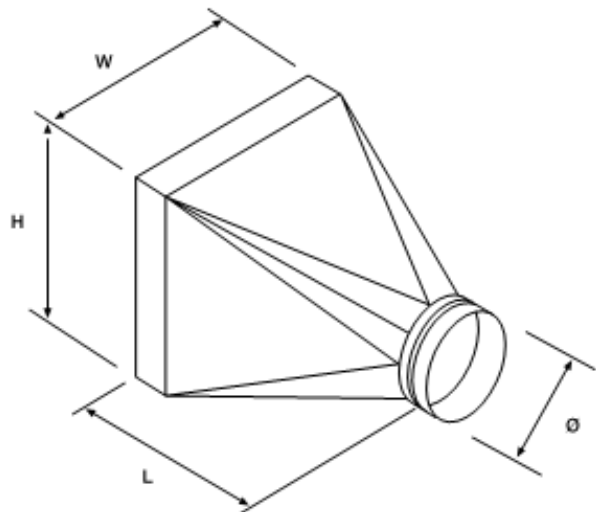
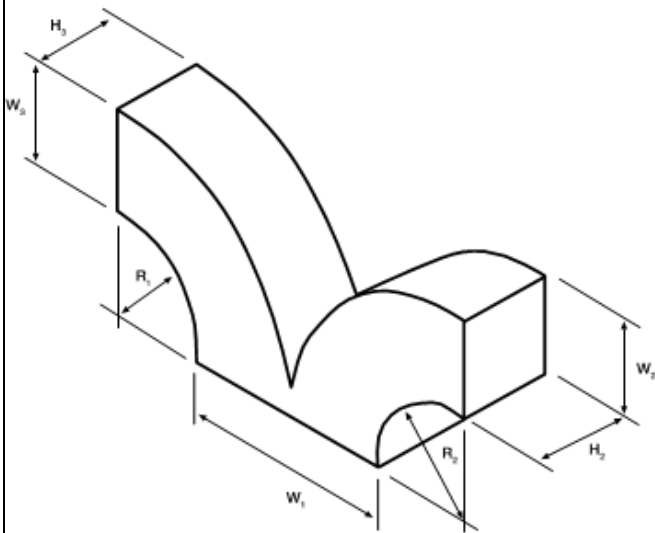
R-FITTING



SPLIT BEND



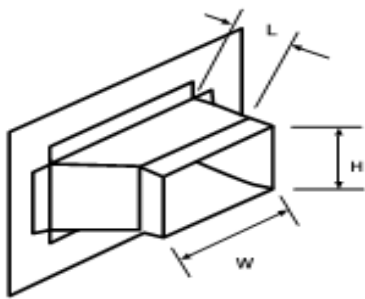
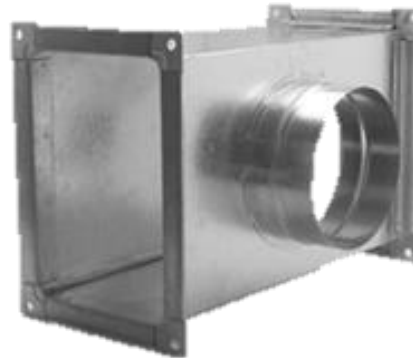
RECTANGULAR TO ROUND TRANSITION



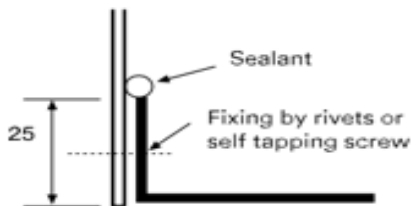
BRANCH CONNECTION - TAKE OFF



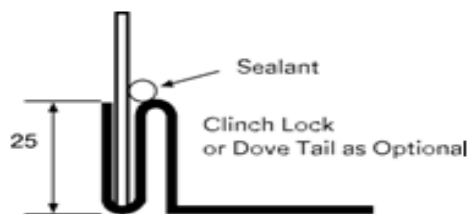
BRANCH CONNECTION - TAKE OFF



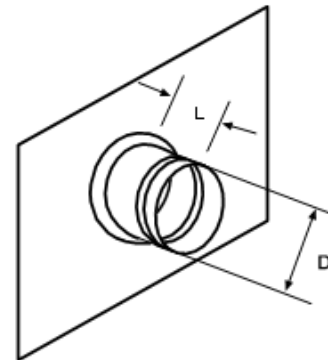
$L = \frac{1}{4} W$, Min. 100 mm



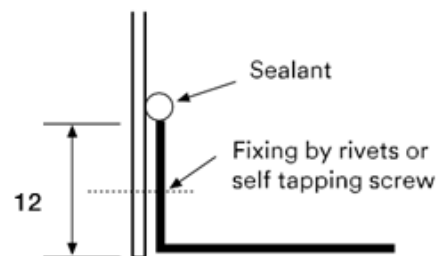
Straight Tap
as a Standard



Clinch Lock
or Dove Tail as Optional



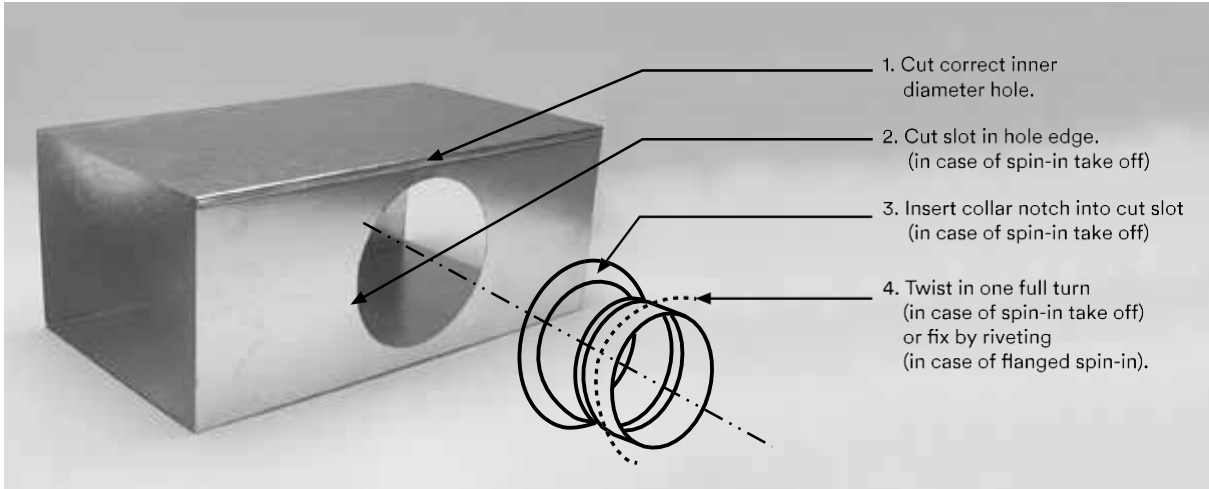
$L = 85$ mm



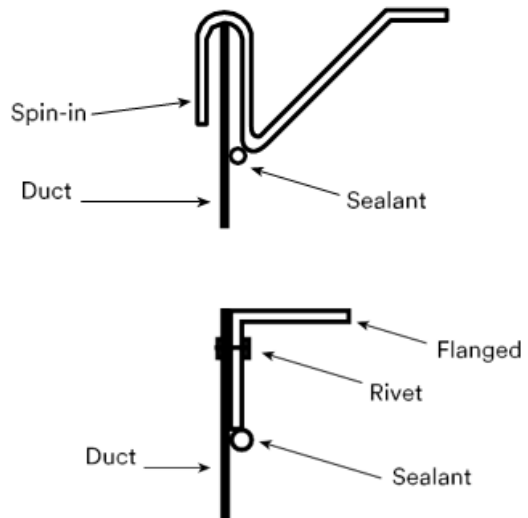
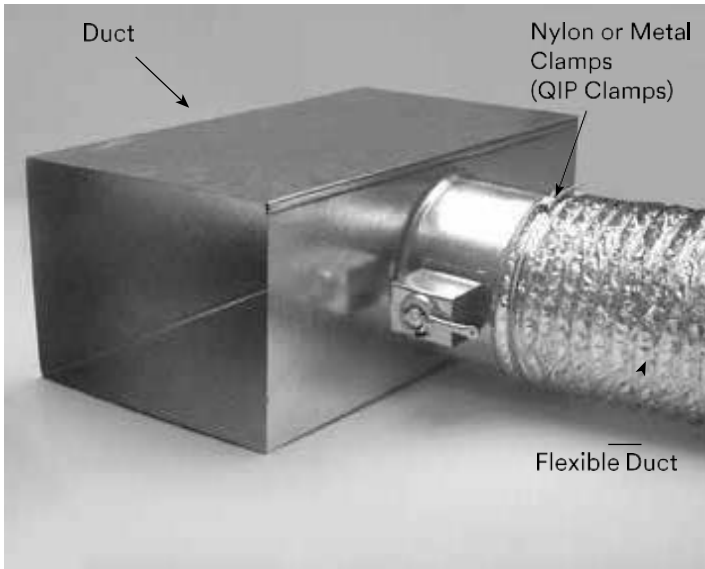
Flanged

BRANCH CONNECTION - TAKE OFF

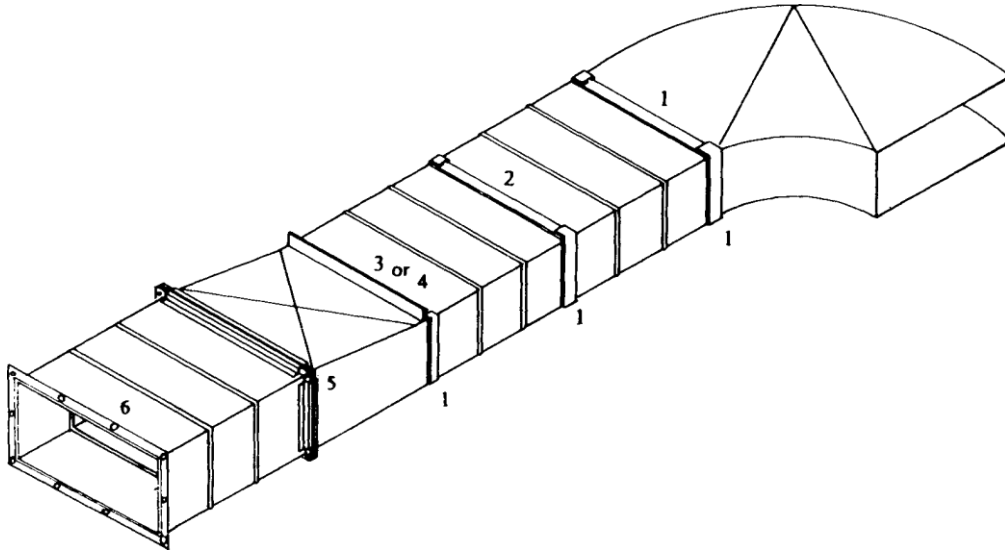
Installation Instructions



Installation Details: Spin In and Flanged Take Off



Transverse Joints

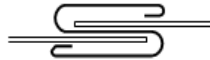


Drive Slip & Hemmed "S" Slip



Drive Slip

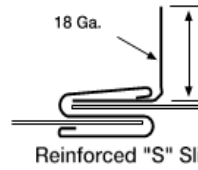
1



Hemmed "S" Slip

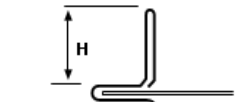
2

Reinforced "S" Slip & Standing S



Reinforced "S" Slip

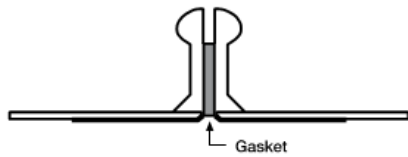
3



Standing S

4

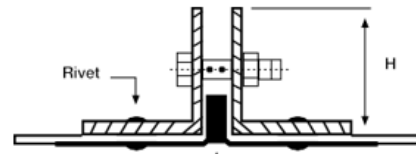
Slide on Flange: SAF - 30



Flange - SAF - 30

5

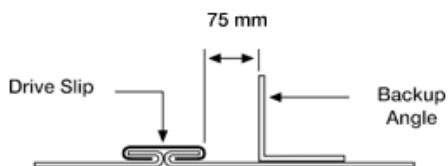
Companion Angles



Companion Angles

6

Backup Angle for Drive Slip

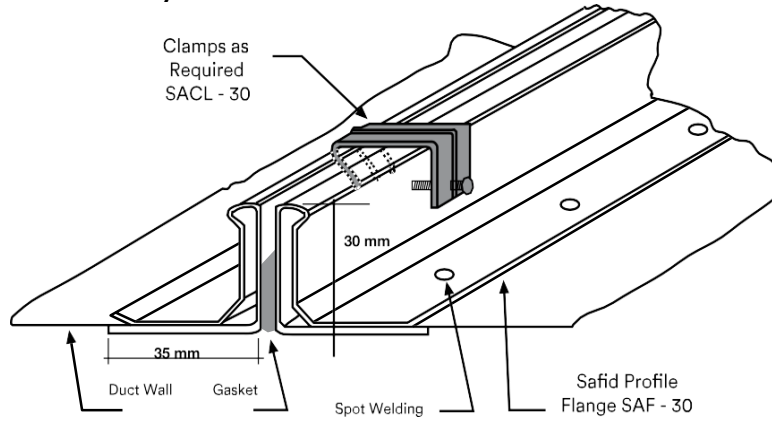


Applications

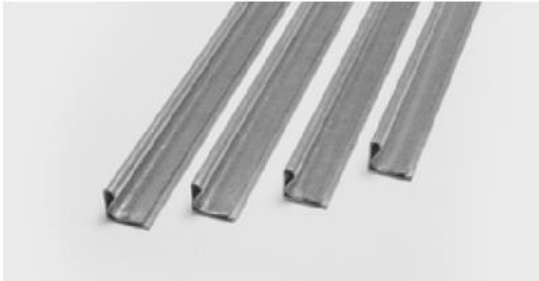
Pressure Class	Duct Height	Backup Angle Size
2" W.G.	458 - 915	25x25x3 mm
3" W.G.	458 - 559	25x25x3 mm
4" W.G.	407 - 508	25x25x3 mm

GASKETS, BOLTS AND NUTS

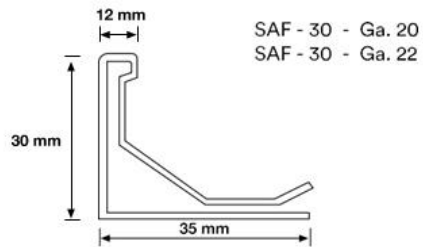
30 Flange Joint System



Slide on Flange: 30



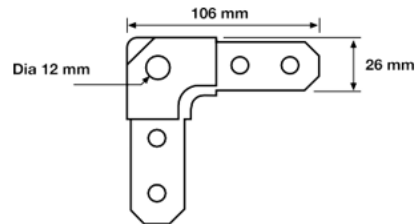
Dimensions



Corner Piece: SACP - 30



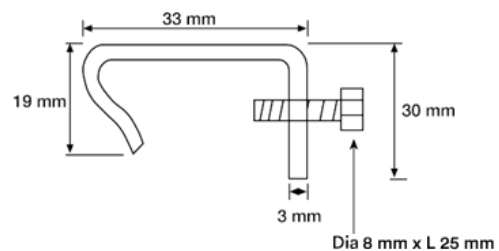
Dimensions



Clamp: SACL - 30, SACL - 35



Dimensions



DUCTWORK CONSTRUCTION SCHEDULE

Galvanized Steel Rectangular Ductworks Construction Schedule

500 & 750 Pa. (2" W.G) Pressure Class (As per SMACNA)

Maximum duct dimension (mm)	Pressure Class	Longitudinal Connections	Duct Gauge	Intermediate Reinforcement	Transverse Connection
0 – 550	500 Pa.	Pittsburgh Lock Seam	G 24 (0.6mm)	Not Required	Hemmed "S" slip driver slip
551 – 750	500 Pa.	Pittsburgh Lock Seam	G 24 (0.6mm)	Not Required	Side on flange 20mm
751 – 1000	750 Pa.	Pittsburgh Lock Seam	G 22 (0.8mm)	Not Required	Side on flange 20mm
1001 – 1200	750 Pa.	Pittsburgh Lock Seam	G 22 (0.8mm)	Not Required	Side on flange 30mm
1201 – 1800	750 Pa.	Pittsburgh Lock Seam	G 20 (1.0mm)	Not Required	Side on flange 40mm

