



GALVA BAHİ

Duct & Air Outlets



GALVA BAHİ
Duct & Air Outlets

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Company Profile

About us:

GALVA BAHI factory is specialized in manufacturing high quality HVAC Aluminum, Galvanized steel & stainless steel ducts (Rectangular or Circular) and its all fittings and accessories using latest advanced technology machines.

Aided by its founders which are having long experience of over 15 years in the fields of duct manufacturing, consultancy, and construction, the organization was established to meet all the market requirements and to become the real Representation of its Slogans "PROFESSIONALISM, QUALITY & COMMITMENT TO EXCELLENCE"

With its professionally well trained staff and engineers familiar with the needed programs like CAMDUCT & CAD MEP and its strict Quality Control and Quality Assurance policy, **GALVA BAHI** has built the bridge of trust in the market with all its clients and business partners.

GALVA BAHI has easy access to all CAIRO, GIZA & new Administrative Capital. The company continues to strive for growth and excellence in serving the needs of the Air-conditioning industries with high-qualified HVAC service.

Vision

We look forward to making Galva Bahi a leading name in the field of manufacturing air ducts and outlets. Our mission is to spread the concept of quality. We are keen on the satisfaction of all customers, and we make every effort to provide an actual model of quality. The high through our work, and increase the diversity of business to confirm the reliability of the company and be in the ranks of major companies at the local level And the world.

Mission

Our goal is to improve the quality and efficiency of all our work and combine speed of implementation and quality. The company always strives to provide Continuous training to improve the capabilities of its cadres in the work team to ensure the highest quality of our products and their professional implementation, and direct attention towards the implementation Services to customers with the highest quality standards, taking into account the predetermined time element.



GALVA BAHI
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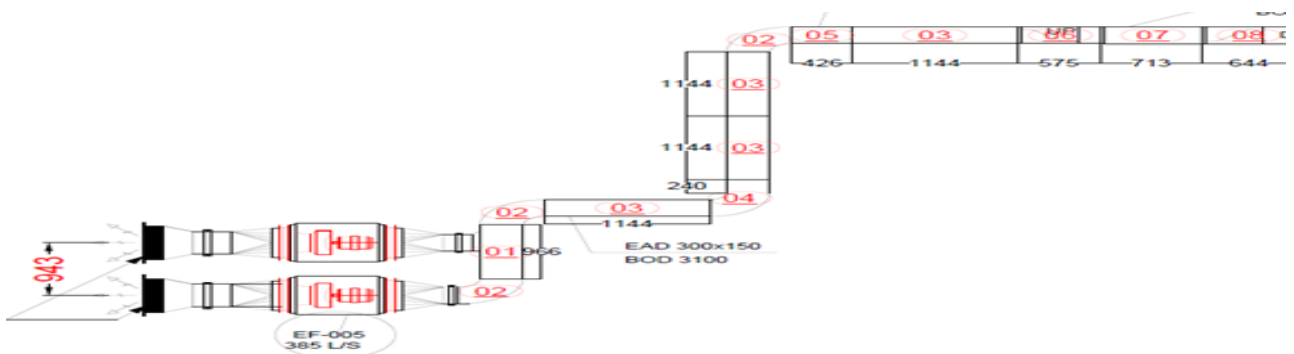
Manufacturing Process

The Manufacturing Process in GALVA DUCT Factory has the following production stages starting from the work order up to the delivery:

▪ **Product Engineering Preparation:**

After the conclusion of the contract, GALVA BAHI Asking the Client for the Project Approved shop drawings in CAD format and the Project Specifications then Starting the Engineering Preparation as follows:

- Doing Compliance Statement with the Project Specs.
- Submitting a Technical Material Submittal for Consultant Approval.
- Itemizing each Duct Line to parts with numbers by using Cad MEP Program.



Item No	Gauge	Description	End 1	End 2	Connector #1	Connector #2	Item Length/Angle	Qty	Weight
01	1.00	Straight (Cut)	300.00x150.00	300.00x150.00	TDC 35mm	TDC 35mm	966.00 (mm)	1	8.96
02	1.00	Radius Bend	300.00x150.00	300.00x150.00	TDC 35mm	TDC 35mm	90.00	3	17.54
03	1.00	Straight (Coil)	300.00x150.00	300.00x150.00	TDC 35mm	TDC 35mm	1144.00 (mm)	19	197.22
04	1.00	Radius Bend	300.00x150.00	300.00x150.00	TDC 35mm	TDC 35mm	90.00	1	7.70
05	1.00	Straight (Cut)	300.00x150.00	300.00x150.00	TDC 35mm	TDC 35mm	426.00 (mm)	1	4.66
06	1.00	Radius Offset	150.00x300.00	150.00x300.00	TDC 35mm	TDC 35mm	600.00 (mm)	1	8.52
07	1.00	Straight (Cut)	300.00x150.00	300.00x150.00	TDC 35mm	TDC 35mm	687.00 (mm)	1	6.74
08	1.00	Radius Offset	150.00x300.00	150.00x300.00	TDC 35mm	TDC 35mm	644.00 (mm)	1	7.85
09	1.00	Radius Bend	300.00x150.00	300.00x150.00	TDC 35mm	SMF 25	90.00	1	7.89
10	1.00	Radius Bend	300.00x150.00	300.00x150.00	TDC 35mm	TDC 35mm	90.00	1	9.79
									276.88

▪ **Quality Review**

- Our Quality Team Reviewing all Documents before submitting to the consultant, and Verifying all input data for the programs to ensure that no missing items.

▪ **Client confirmation**

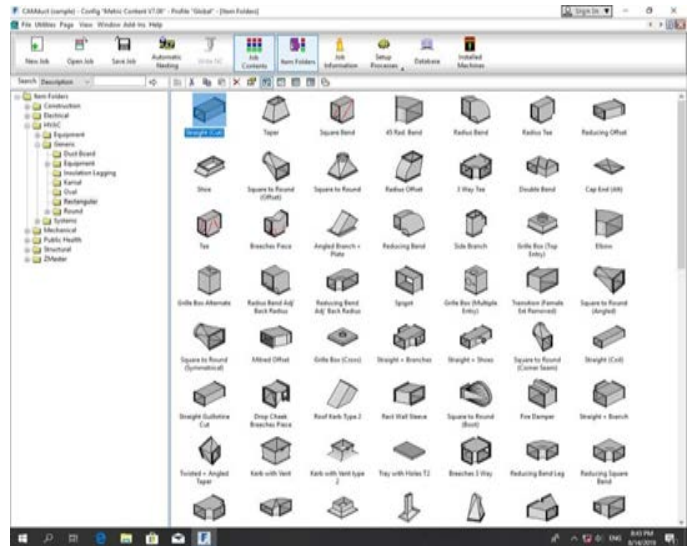
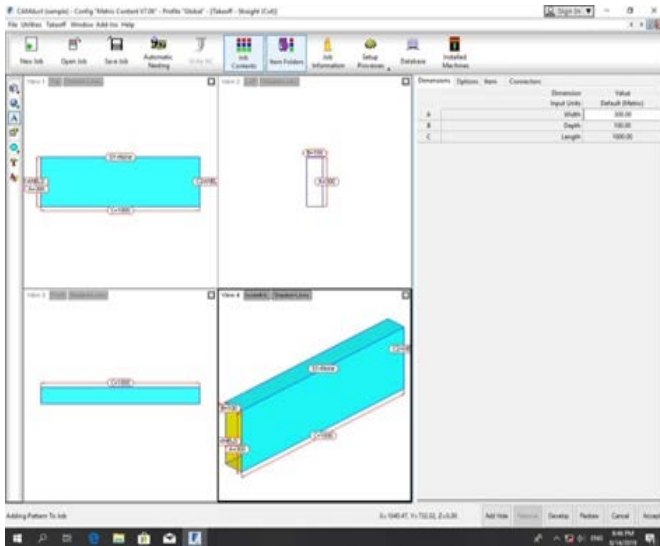
- Submitting the itemized drawings and Items Schedule to the client for confirmation to start Manufacturing.

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Manufacturing Process

▪ Start Manufacturing

- By using CAM DUCT Program, Our Technical office engineers converting the itemized drawings (approved by the client) to work orders for the work shop to start Manufacturing and print stickers for each item.
- The production team separates the work orders according to their shapes to start Manufacturing each item on its suitable machine like the straight ducts to be manufactured on the Auto fold machine, Reducer and Elbows to be manufactured on the CNC Plasma Cutter Etc.



▪ Primary Quality stage

- The Quality team verifies the used Raw Material, Randomly some items dimensions, Are the items match all the project specs and the international standards requirements or notetc.
- This stage applied continuously before and during Manufacturing.

▪ Final quality stage before delivering

- After Completing the order, The Quality team verifies the quantities, items stickers, storing to keep all items free of damage.



GALVA BAHI

Duct & Air Outlets

Our Machines

GALVA BAHI has the power to produce around **150 ton per month** through **more than 25 of high efficient Machines** and this is a brief description for some of them

▪ **Automatic Duct line**

GALVA BAHI has automatic duct line which has full capacity around 150 ton/month. The automatic duct line has 4 sets electric de-coilers driven by independent frequency controlled motors which help to use different material thicknesses at the same time



▪ **Duct Bearer**

This machine is used to form beads on flat sheet metal for stiffening air ducts and fittings.



▪ **TDF Flange Forming**

This machine mainly used for making flange at edge of plate for future joint, is also among basic equipment of modern duct forming line. The flange shape made by the TDF machine has a perfect shape and practical, which makes it a perfect part of duct forming line with very high quality of finishing.



▪ **Electrical Seam Locker**

This machine is used for closing Pittsburgh seams on straight or curved ducts.





GALVA BAHİ
Duct & Air Outlets

Our Machines

▪ **Pneumatic Formation Machine**

It helps to fold any material more easily by pressure. And it works stable without electricity by just connecting with a compressor.



▪ **Lock Former Machine**

The lock former machine is a basic HVAC forming machine that forms the locks of a duct. The steel forming rolls on this machine are hardened using matching cut gears and needle bearings which can be used for years.



▪ **Plasma Cutting Machine**

Rigid frame built with thick concrete plate steel to ensure function stability and durability. High speed cutting with great precision.



▪ **Folding Machine**

It is a very basic machine for HVAC ductworks. It can fold sheet metal and also make duct and fittings manual.

TDF folding machine can be used for the same reasons but with flange forming in sheet metal. This is due to the attached toothy part which help to fold sheet metal with flanges more easily.



Raw Material

GALVA BAHI uses different materials as per project requirements and subtitled below is sample and not limited:

- **Galvanized Steel:**

Galvanized ductwork is the most common material used in the Market so it is the main core of our products and we have a large experience in that field, starting from what kind of material finishing to the galvanize degree.

- **MS (Black) Steel:**

Black steel material fabricates high thickness steel resulting to more strong and suitable for high pressure duct such as main kitchen exhaust, stack duct in an automobile industry.

- **Stainless Steel :**

Commercial applications for stainless steel ductwork are useful for businesses and large manufacturing companies that need proper installation for large applications and industrialized construction. Using stainless steel duct work for applications is just as strong as galvanized and aluminum and it resists corrosives.

Stainless steel is perfect for applications such as Refinery Labs, Hospitals & food processing plants since the salts are resisted making it a better choice than materials such as galvanized steel.

Product List

- Stack Ducts
- Trunk Ducts
- Trunk Ducts (S&D cleats included)
- Drive cleats
- Standings Cleats
- Blind End Cap
- Standing Collar
- Transient Standing Collar
- Flat Elbow 45° - (Short way)
- Flat Elbow 90° - (Short way)
- Side Elbow 45° - (Long way)
- Side Elbow 90° - (Long way)
- Reverse Elbow

- Duct Riser – (6” Rise)
- Duct Reducer – (flat)
- Joist Lining
- Plenum 28 - GN
- Plenum sets – 28 GN
- Side Take off
- Top Take off
- Angle Take off - 45°
- Adjustable Take off

Product Descriptions & Design

▪ Rectangular Ducts

Description

Rectangular single wall duct & 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 & fittings.

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

Design

Rectangular ducts and fittings are fabricated from metal sheets which are hemmed and seamed, pressure-welded, or riveted. The ducts and fittings are available in low- and medium pressure versions (min. vacuum / max. overpressure):

- class **N** design (low-pressure design): standard design from -400 Pa to +1000 Pa
- class **S** design (medium-pressure design): from -1000 Pa to 2500 Pa

The dimensional tolerances and metal sheet thickness are selected according to the following criteria: length of the long side of a straight duct, the dimension of the longest side of the connection cross section of the fitting.

The Table below provides dimensional tolerances and minimum metal sheet thickness sizes.

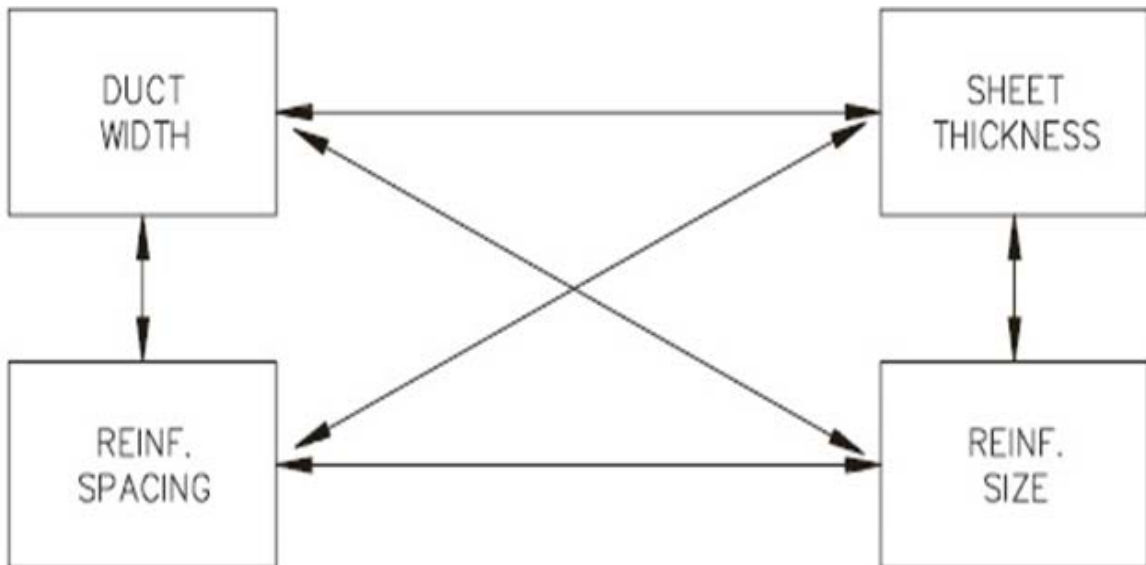
<i>Dimension of the long side (mm)</i>	<i>Dimensional tolerance for the duct side (mm)</i>	<i>Class N minimum sheet thickness (mm)</i>	<i>Class S minimum sheet thickness (mm)</i>
100-500	0-4	0.6	0.7
501-1000	0-4	0.8	0.9
1001-2000	0-4	1.0	1.1
2001-4000	0-5	1.1	1.2



Product Descriptions & Design

Design of Duct Thickness and Reinforcement

- ❑ For each pressure level and a constant duct size, the thicker the sheet the more distant the reinforcement spacing; the thinner the sheet the closer the reinforcement spacing
- ❑ For a given sheet thickness and constant duct size, reinforcement size, and reinforcement spacing, reduce with pressure reduction and increase with pressure increase.
- ❑ The larger a duct at a given pressure, the larger the reinforcement and the closer the reinforcement spacing on a selected gage.
- ❑ For each combination of sheet thickness, pressure, and duct width, a maximum reinforcement spacing occurs beyond which sheet deflection is not controlled by reinforcement size nor reinforce



Product Descriptions & Design

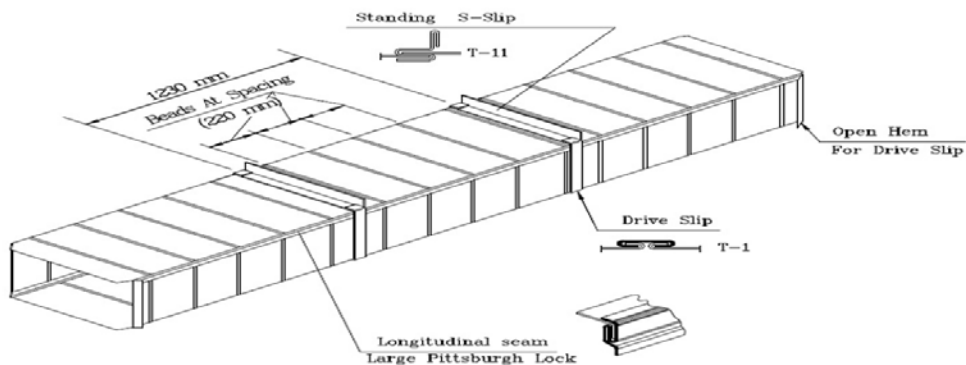
Rectangular Duct Construction Schedule

A. Low Pressure Ducts (up to 2" wg (500 pa))

1. Duct Width up to 12" (300 mm)

- Connector Type:
 - ❖ Shared between Duct Ends
 - ❖ Overlapped by 1" (25mm)
- Longitudinal Joint:
 - ❖ Small Pittsburgh Lock (see the figure)
- Transverse Joint:
 - ❖ S & Drive Slip (see the figure)
- For more information see the table below:

Coil Width 1250 mm



Duct Width	Duct thickness	Transverse Connector		Std. STR. Duct Finished Length	Extra Reinforcement
		Duct Width	Duct Depth		
up to 12" (300 mm)	24 ga. (0.6 mm)	T-11 22 , 22 ga. (0.7 , 0.8 mm)	Drive Slip T-1 24 ga. (0.8 mm)	1195 mm	Not Required

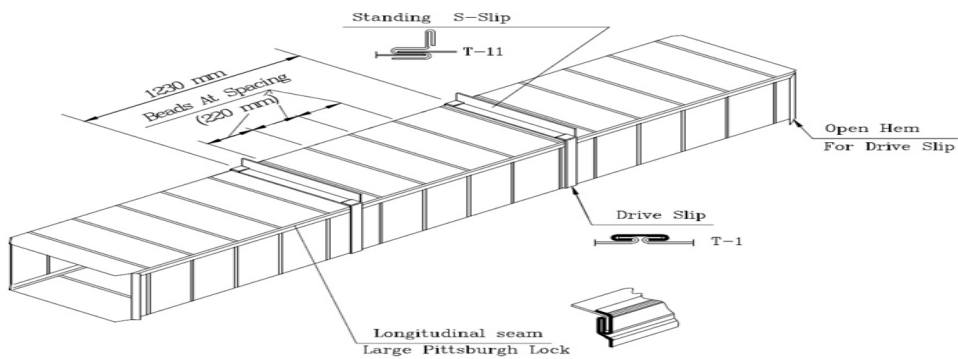
Product Descriptions & Design

Rectangular Duct Construction Schedule

Low Pressure Ducts (up to 2" wg (500 pa))

2. Duct Width from 12" (301 mm) to 24" (600 mm)
 - Connector Type:
 - ❖ Shared between Duct Ends
 - ❖ Overlapped by 1" (25mm)
 - Longitudinal Joint:
 - ❖ Large Pittsburgh Lock (see the figure)
 - Transverse Joint:
 - ❖ TDC Flanges with clips (see the figure)
 - For more information see the table below:

Coil Width 1250 mm



Duct Width	Duct thickness	Transverse Connector		Std. STR. Duct Finished Length	Extra Reinforcement
		Duct Width	Duct Depth		
12" TO 24" 301 to 600MM	24 ga. (0.7 mm)	T-11 22 , 22 ga. (0.7 , 0.8 mm)	Drive Slip T-1 24 ga. (0.8 mm)	1195 mm	Not Required

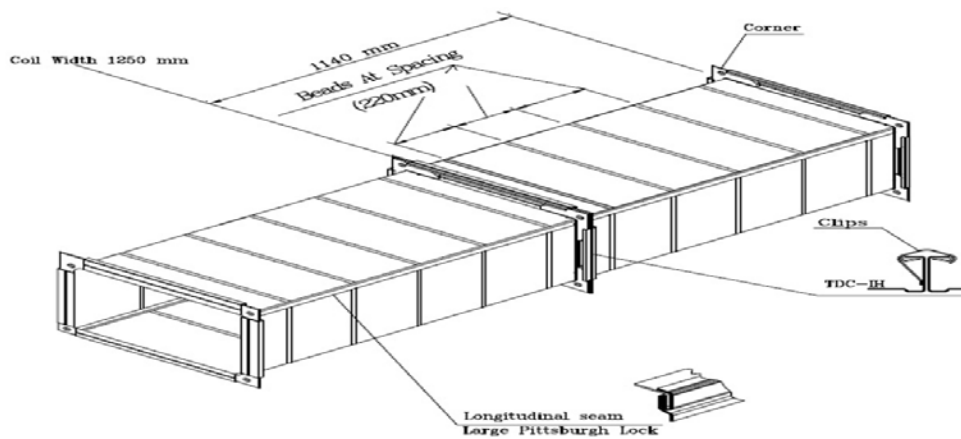
Product Descriptions & Design

Rectangular Duct Construction Schedule

Low Pressure Ducts (up to 2" wg (500 pa))

3. Duct Width from 24" (600 mm) to 30" (750 mm)

- Connector Type:
 - ❖ Shared between Duct Ends
 - ❖ Overlapped by 1" (25mm)
- Longitudinal Joint:
 - ❖ Large Pittsburgh Lock (see the figure)
- Transverse Joint:
 - ❖ TDC Flanges with clips (see the figure)
- For more information see the table below:



Duct Width	Duct thickness	Transverse Connector For Width and Depth	Std. STR. Duct Finished Length	Extra Reinforcement
24" TO 30" 601 to 760 MM	24 ga. (0.7 mm)	TDC-IH 35mm T-25 a/b (Transvers Duct Connector With Internal Hem)	1150 mm	Not Required

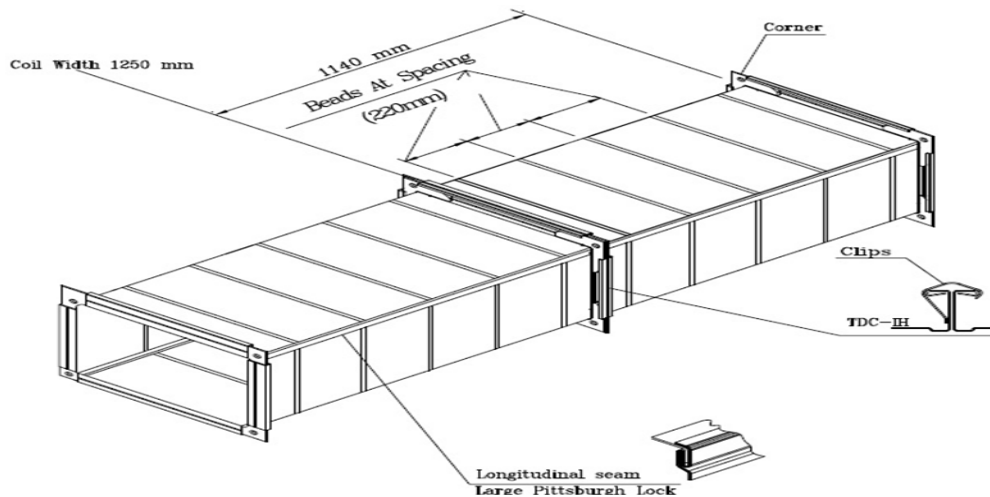
Product Descriptions & Design

Rectangular Duct Construction Schedule

Low Pressure Ducts (up to 2" wg (500 pa))

4. Duct Width from 30" (761 mm) to 49" (1220 mm)

- Connector Type:
 - ❖ Shared between Duct Ends
 - ❖ Overlapped by 1" (25mm)
- Longitudinal Joint:
 - ❖ Large Pittsburgh Lock (see the figure)
- Transverse Joint:
 - ❖ TDC Flanges with clips (see the figure)
- For more information see the table below:



Duct Width	Duct thickness	Transverse Connector For Width and Depth	Std. STR. Duct Finished Length	Extra Reinforcement
30" to 49" 761 to 1220 mm	22 ga. (0.8 mm)	TDC-IH 35mm T-25 a/b (Transvers Duct Connector With Internal Hem)	1150 mm	Not Required

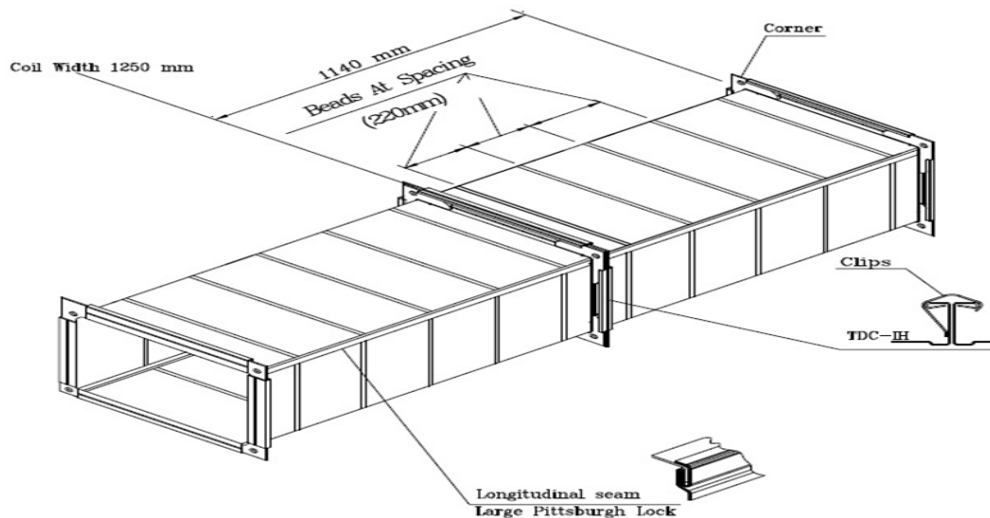
Product Descriptions & Design

Rectangular Duct Construction Schedule

Low Pressure Ducts (up to 2" wg (500 pa))

5. Duct Width from 49" (1221 mm) to 72" (1800 mm)

- Connector Type:
 - ❖ Shared between Duct Ends
 - ❖ Overlapped by 1" (25mm)
- Longitudinal Joint:
 - ❖ Large Pittsburgh Lock (see the figure)
- Transverse Joint:
 - ❖ TDC Flanges with clips (see the figure)
- For more information see the table below:



Duct Width	Duct thickness	Transverse Connector For Width and Depth	Std. STR. Duct Finished Length	Extra Reinforcement
49" to 72" 1221 to 1800 mm	20 ga. (1.0 mm)	TDC-IH 35mm T-25 a/b (Transvers Duct Connector With Internal Hem)	1150 mm	Not Required

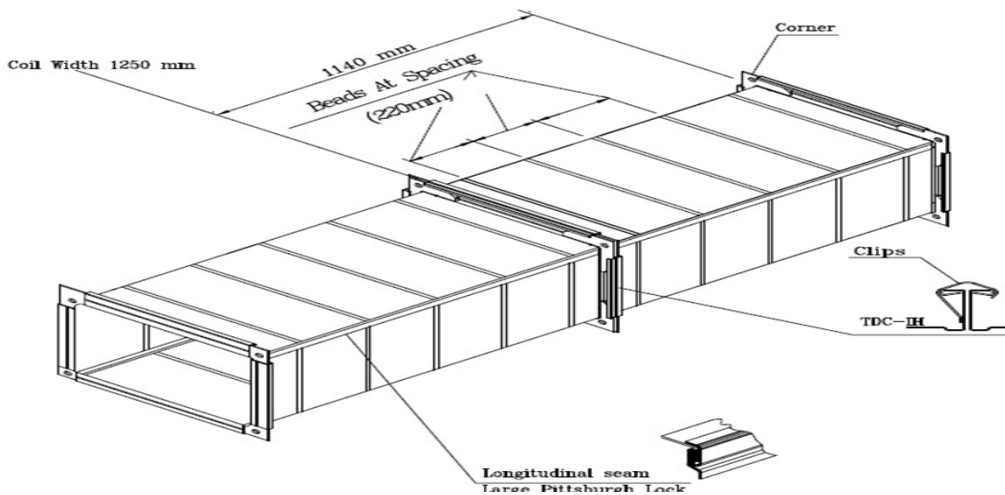
Product Descriptions & Design

Rectangular Duct Construction Schedule

Low Pressure Ducts (up to 2" wg (500 pa))

6. Duct Width over 72" (1800 mm)

- Connector Type:
 - ❖ Shared between Duct Ends
 - ❖ Overlapped by 1" (25mm)
- Longitudinal Joint:
 - ❖ Large Pittsburgh Lock (see the figure)
- Transverse Joint:
 - ❖ TDC Flanges with clips (see the figure)
- For more information see the table below:



Duct Width	Duct thickness	Transverse Connector For Width and Depth	Std. STR. Duct Finished Length	Extra Reinforcement
OVER-72" 1800 mm	18 ga. (1.2 mm)	TDC-IH 35mm T-25 a/b (Transvers Duct Connector With Internal Hem)	1150 mm	Not Required

Product Descriptions & Design

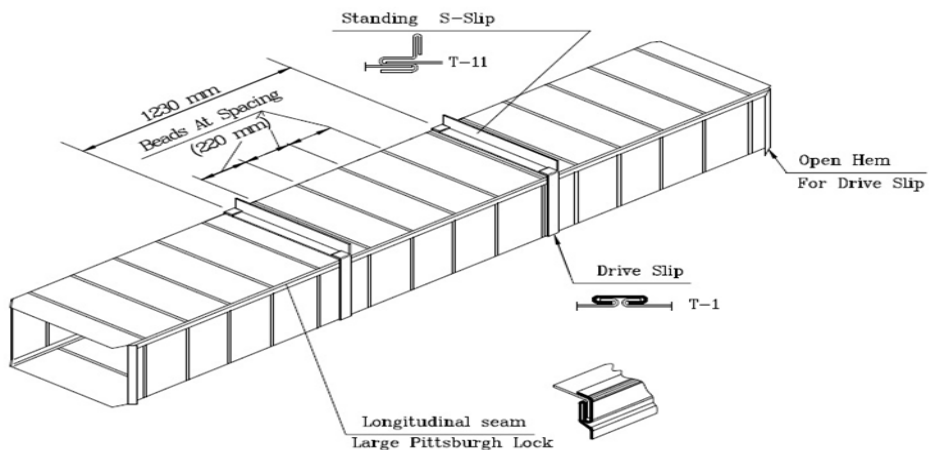
Rectangular Duct Construction Schedule

B. Medium Pressure Ducts (Over than 2" wg (500 pa))

1. Duct Width up to 12" (300 mm)

- Connector Type:
 - ❖ Shared between Duct Ends
 - ❖ Overlapped by 1" (25mm)
- Longitudinal Joint:
 - ❖ Small Pittsburgh Lock (see the figure)
- Transverse Joint:
 - ❖ S & Drive Slip (see the figure)
- For more information see the table below:

Coil Width 1250 mm



Duct Width	Duct thickness	Transverse Connector		Std. STR. Duct Finished Length	Extra Reinforcement
		Duct Width	Duct Depth		
up to 12" (300 mm)	22 ga. (0.8 mm)	T-11 22 , 22 ga. (0.7 , 0.8 mm)	Drive Slip T-1 24 ga. (0.8 mm)	1230 mm	Not Required

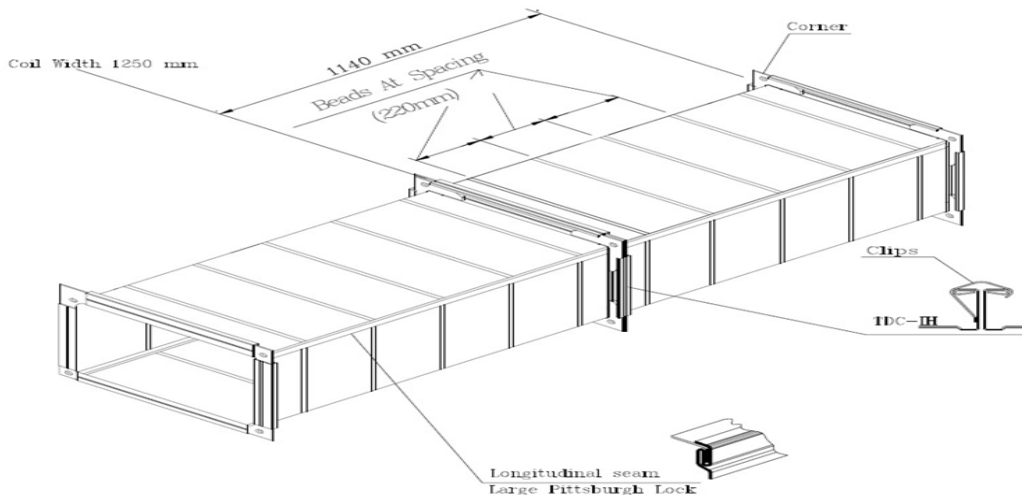
Product Descriptions & Design

Rectangular Duct Construction Schedule

Medium Pressure Ducts (Over than 2" wg (500 pa))

2. Duct Width from 12" (300 mm) to 24" (600 mm)

- Connector Type:
 - ❖ Shared between Duct Ends
 - ❖ Overlapped by 1" (25mm)
- Longitudinal Joint:
 - ❖ Small Pittsburgh Lock (see the figure)
- Transverse Joint:
 - ❖ TDC Flanges with clips (see the figure)
- For more information see the table below:



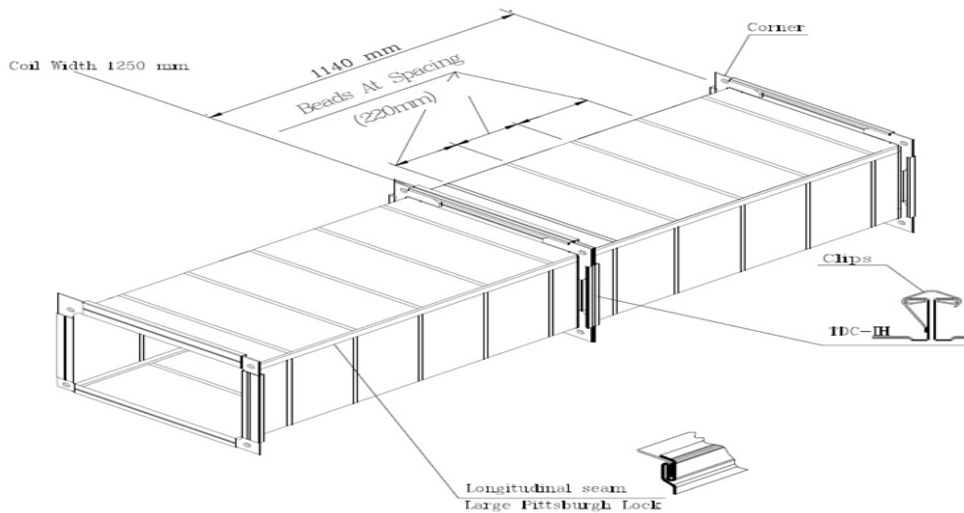
Duct Width	Duct thickness	Transverse Connector For Width and Depth	Std. STR. Duct Finished Length	Extra Reinforcement
12" TO 24" (300-600 MM)	22 ga. (0.8 mm)	TDC-IH 35mm T-25 a/b (Transvers Duct Connector With Internal Hem)	1140 mm	Not Required

Product Descriptions & Design

Rectangular Duct Construction Schedule

Medium Pressure Ducts (Over than 2" wg (500 pa))

3. Duct Width from 24" (601 mm) to 30" (760 mm)
 - Connector Type:
 - ❖ Shared between Duct Ends
 - ❖ Overlapped by 1" (25mm)
 - Longitudinal Joint:
 - ❖ Small Pittsburgh Lock (see the figure)
 - Transverse Joint:
 - ❖ TDC Flanges with clips (see the figure)
 - For more information see the table below:



Duct Width	Duct thickness	Transverse Connector For Width and Depth	Std. STR. Duct Finished Length	Extra Reinforcement
24" TO 30" 601 to 760 MM	20 ga. (1.0 mm)	TDC-IH 35mm T-25 a/b (Transvers Duct Connector With Internal Hem)	1140 mm	Not Required

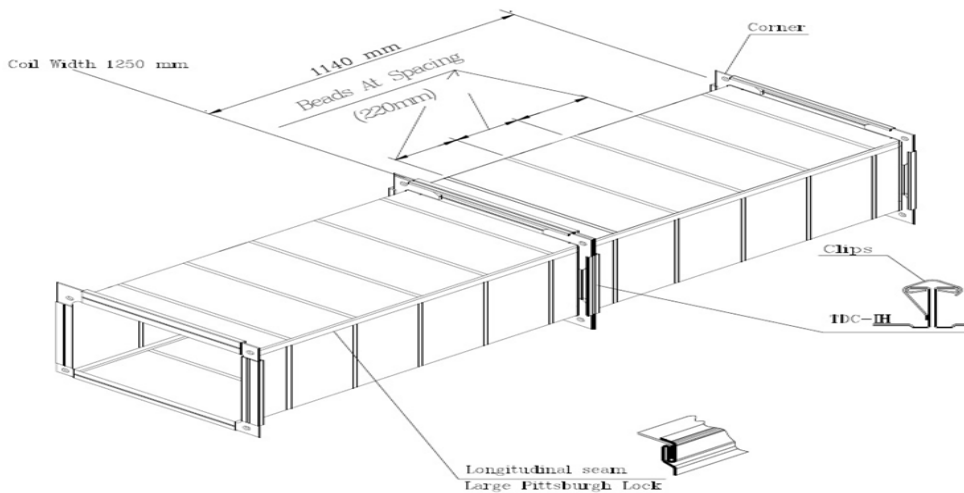
Product Descriptions & Design

Rectangular Duct Construction Schedule

Medium Pressure Ducts (Over than 2" wg (500 pa))

4. Duct Width from 30" (761 mm) to 49 (1220 mm)

- Connector Type:
 - ❖ Shared between Duct Ends
 - ❖ Overlapped by 1" (25mm)
- Longitudinal Joint:
 - ❖ Small Pittsburgh Lock (see the figure)
- Transverse Joint:
 - ❖ TDC Flanges with clips (see the figure)
- For more information see the table below:



Duct Width	Duct thickness	Transverse Connector For Width and Depth	Std. STR. Duct Finished Length	Extra Reinforcement
30" to 49" 761 to 1220 mm	18 ga. (1.2 mm)	TDC-IH 35mm T-25 a/b (Transvers Duct Connector With Internal Hem)	1140 mm	Not Required

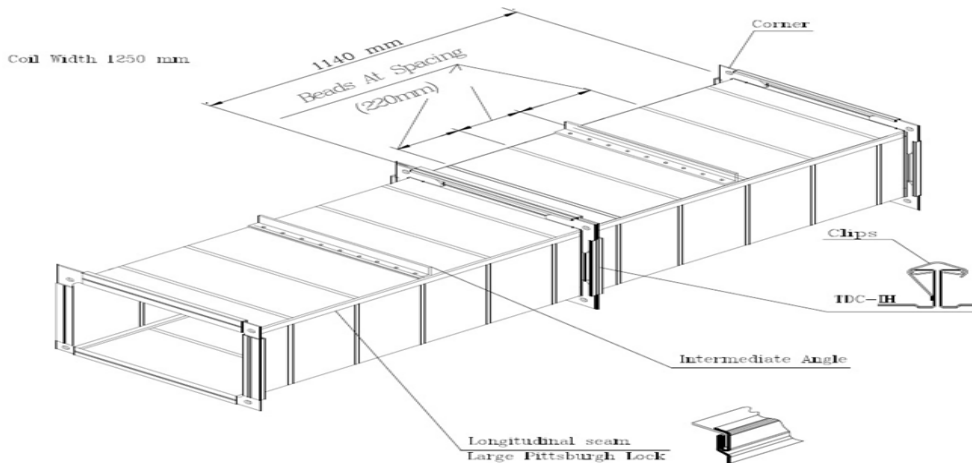
Product Descriptions & Design

Rectangular Duct Construction Schedule

Medium Pressure Ducts (Over than 2" wg (500 pa))

5. Duct Width from 49" (1221 mm) to 80 (2030 mm)

- Connector Type:
 - ❖ Shared between Duct Ends
 - ❖ Overlapped by 1" (25mm)
- Longitudinal Joint:
 - ❖ Small Pittsburgh Lock (see the figure)
- Transverse Joint:
 - ❖ TDC Flanges with clips (see the figure)
- For more information see the table below:



Duct Width	Duct thickness	Transverse Connector For Width and Depth	Std. STR. Duct Finished Length	Extra Reinforcement
49" to 80" 1221 to 2030 mm	18 ga. (1.2 mm)	TDC-IH 35mm T-25 a/b (Transvers Duct Connector With Internal Hem)	1140 mm	Intermediate Angle 4cmX4cmX4mm Between Joints

Note: For Duct Depth Over 60" to 80" Intermediate Reinforcement Angle
Will be Applied on Duct Depth as well as Duct width

Product Descriptions & Design

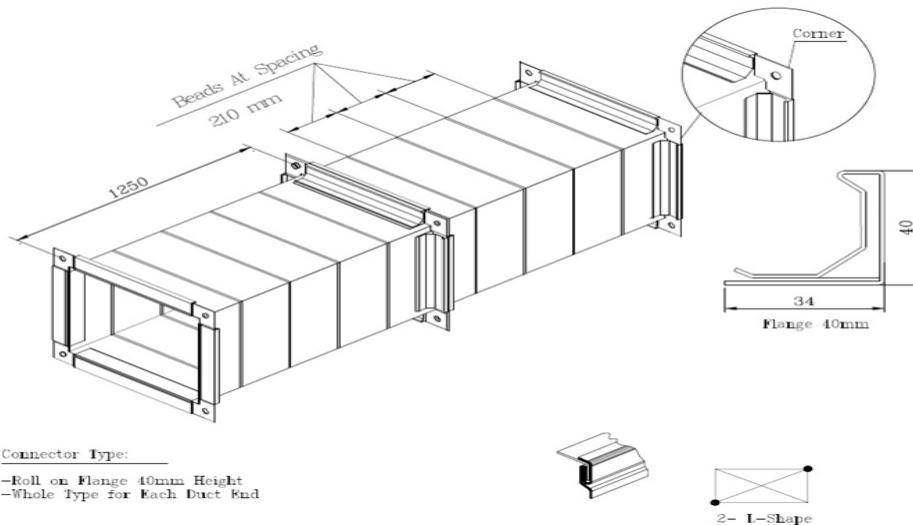
Rectangular Duct Construction Schedule

Medium Pressure Ducts (Over than 2" wg (500 pa))

6. Duct Width from 49" (1220 mm) to 80 (2000 mm)

- ❑ Connector Type:
 - ❖ Shared between Duct Ends
 - ❖ Overlapped by 1" (25mm)
- ❑ Longitudinal Joint:
 - ❖ Small Pittsburgh Lock (see the figure)
- ❑ Transverse Joint:
 - ❖ TDC Flanges with clips (see the figure)

Coil Width 1250 mm



Connector Type:

- Roll on Flange 40mm Height
- Whole Type for Each Duct End

Duct Width	Duct thickness	Transverse Connector For Width and Depth	Std. STR. Duct Finished Length	Extra Reinforcement
OVER-80" 2031 mm	16 ga. (1.5 mm)	TDC-IH 35mm T-25 a/b (Transvers Duct Connector With Internal Hem)	1250 mm	Not Required

Product Descriptions & Design

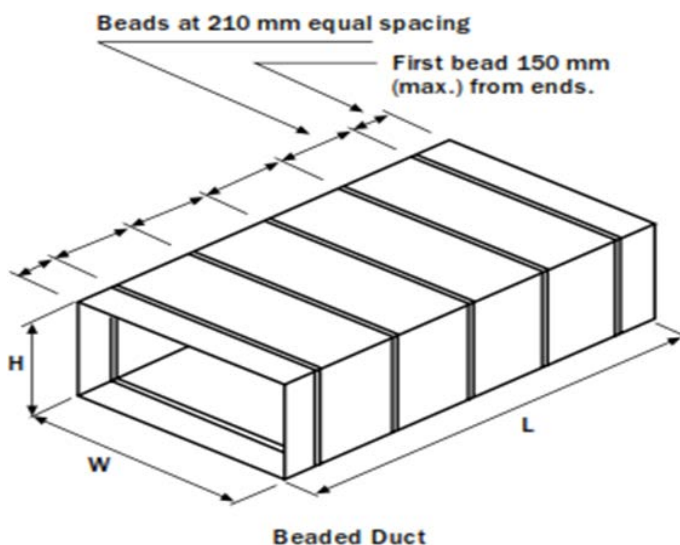
Assembly Instructions

Rectangular duct must be assembled according to these instructions

- Before Assembly all Parts must be free of Dirt and clean.
- Only use Undamaged pieces.
- Apply continuous gasket to effectively seal flanges and corners.
- Fasten the duct and fitting together with bolts & nuts at four corners.
- Mating flange shall be locked together by duct clamps spaced at centers not exceeding 200mm.
- The following numbers of duct clamps are recommended:

• Normal Reinforcement

All straight ducts are beaded or cross broken (except if duct is double wall, internally lined, negative pressure, Ga.18 ducts, and 4" w.g. or above) and fittings are cross broken from size 483 mm and above. Standard duct length : 1250 mm



duct dimension (mm)	number
0 - 200	0
250 - 400	1
450 - 600	2
650 - 800	3
850 - 1000	4
1050 - 1200	5
1250 - 1400	6
1450 - 1600	7
1650 - 1800	8
1850 - 2000	9
2050 - 2200	10

Product Descriptions & Design

Lined Ducts

GALVA BAHI can supply duct and fittings with Internal Lining

➤ Description

❑ **GALVA BAHI** lined rectangular duct and fittings are available with an insulating liner coated with black glass tissue to protect against erosion and microbial growth. This acoustic/thermal liner can be used with air velocities up to 5,000 fpm.

❑ Standard length is 1200 mm.

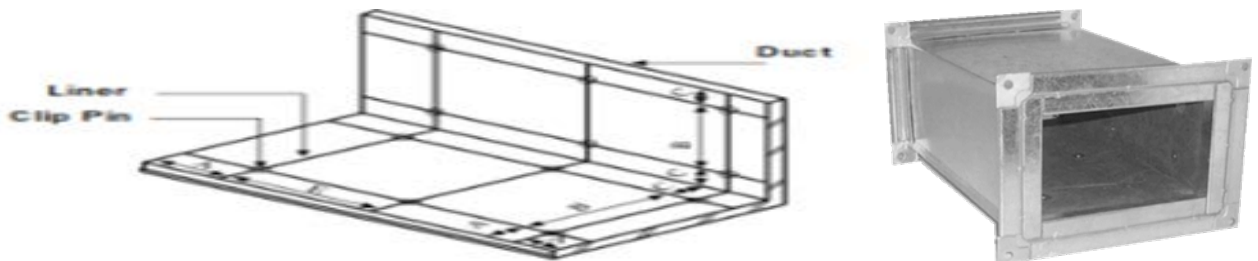
❑ Standard acoustic/thermal insulation : 25mm, 48 kg/m³ , BGT facing. Other thickness and density can be supplied on request.

❑ Insulation edge coverings : all insulation edges are covered by galv.steel channels fixed to duct.epoxy...)

➤ Dimensions

❑ 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



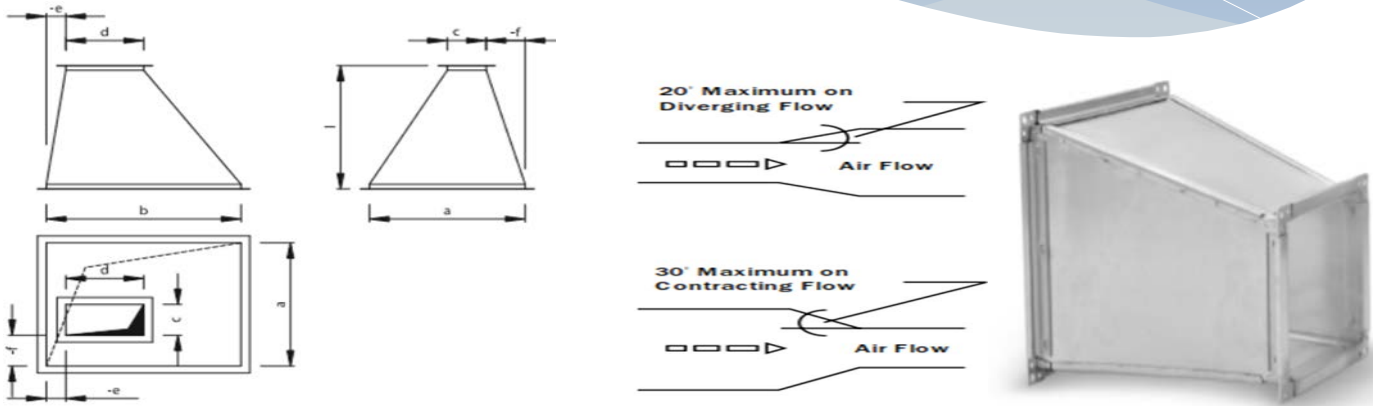
Velocity	Dimensions			
	A	B	C	E
0 - 2500 fpm	76	305	102	457
2501 - 5000 fpm	76	152	102	406

Product Descriptions & Design

Rectangular Ducts Fittings

Reducer

Dimensions

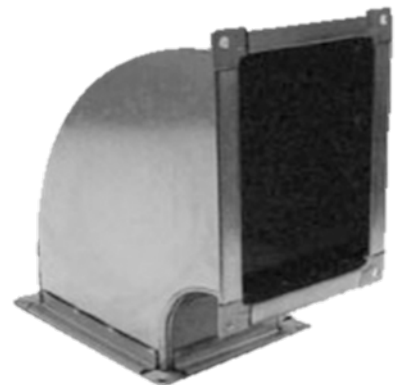
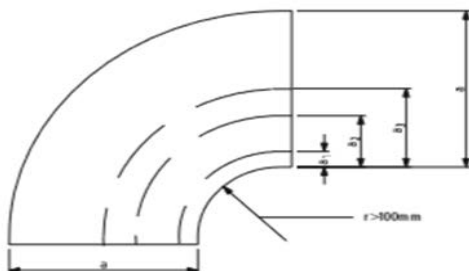


Radius Bend

Dimensions

The vane alignment is according to EN 1505, “Ventilation for buildings. Sheet metal air ducts and fittings with rectangular cross-section. Dimensions”.

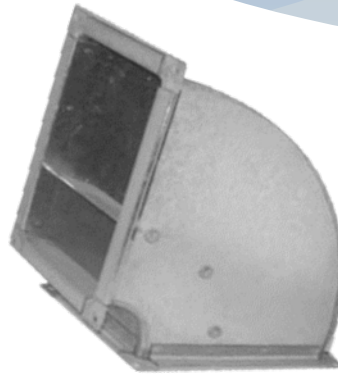
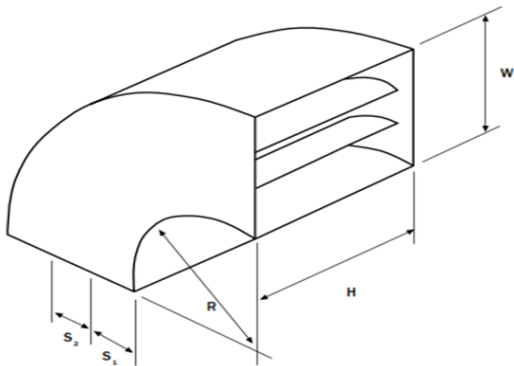
$> 400 \leq 800$	1	$a/3$		
$> 800 \leq 1600$	2	$a/4$	$a/2$	
$> 1600 \leq 2000$	3	$a/8$	$a/3$	$a/2$



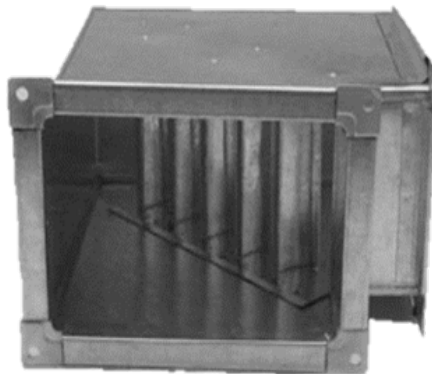
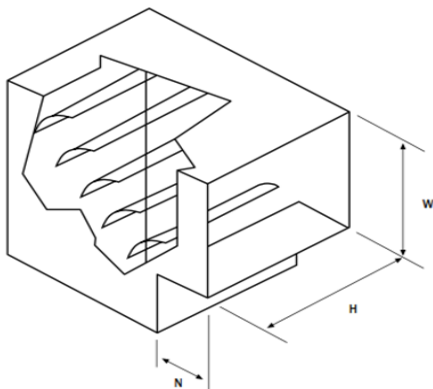
Product Descriptions & Design

▪ Rectangular Ducts Fittings

Radius Bend with Splitter Vanes



Square Throat Bend with Turning Vanes



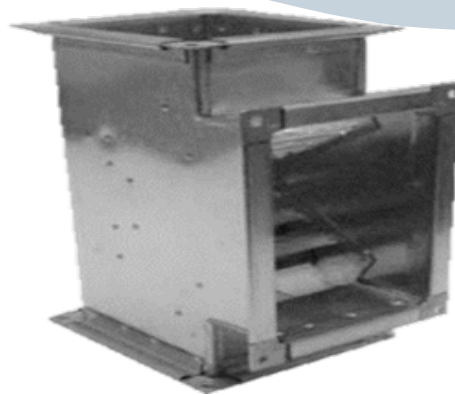
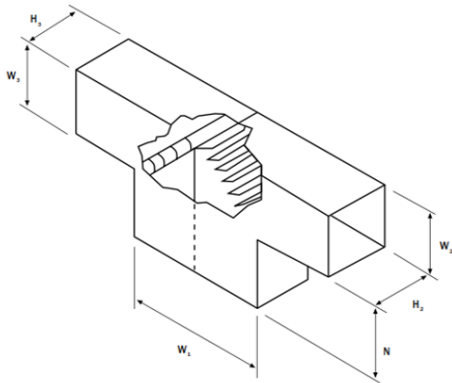


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Duct & Air Outlets

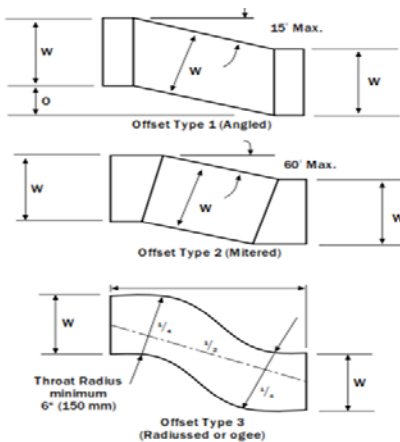
Product Descriptions & Design

▪ Rectangular Ducts Fittings

TEE



Offset

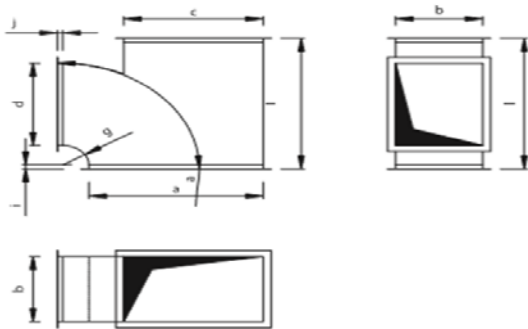


Product Descriptions & Design

▪ Rectangular Ducts Fittings

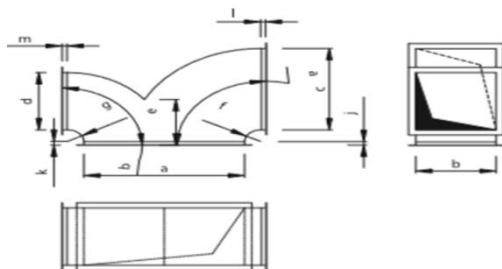
R-Fitting

All T-pieces with take-off bends are fitted with flange frames made of sheet angles and braced by cross-wise ribbing. A take-off bend provides smooth distribution of air without increasing the flow turbulence due to the presence of a vane.



Split Bend

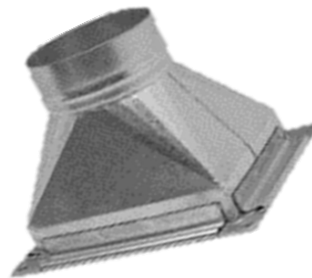
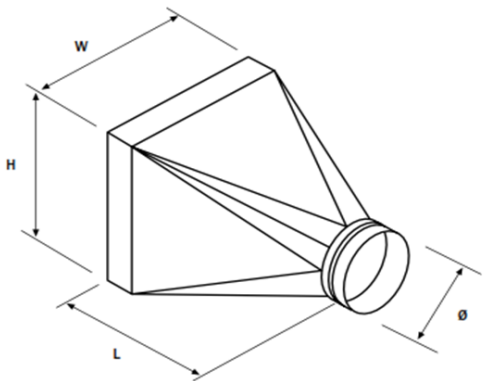
The wye tees are fitted with sheet angles, and the entire fitting is braced by cross-wise ribbing. This fitting allows building the ductwork with two take-offs set at any angle. The width may vary between the two take-off ports. Vanes can be installed.



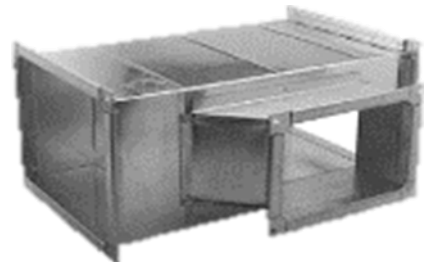
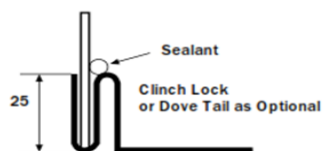
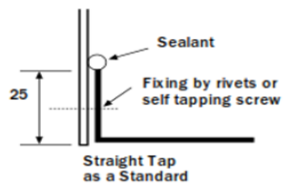
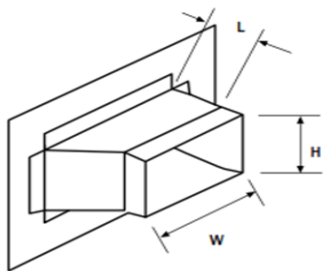
Product Descriptions & Design

▪ Rectangular Ducts Fittings

Transition Rectangular to Round



Branch Connection / Take off to 45°

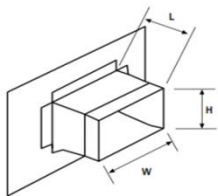


$L = \frac{1}{4} W$, Min. 100 mm

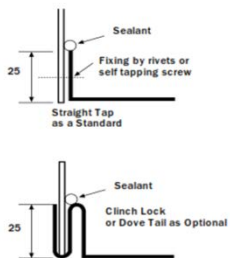
Product Descriptions & Design

▪ Rectangular Ducts Fittings

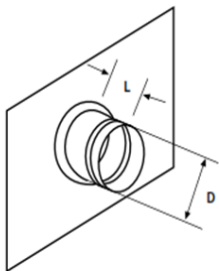
Branch Connection / Take Off To90



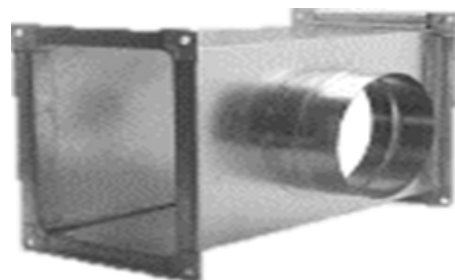
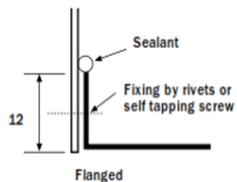
L = 100 mm



Branch Connection / Take Off



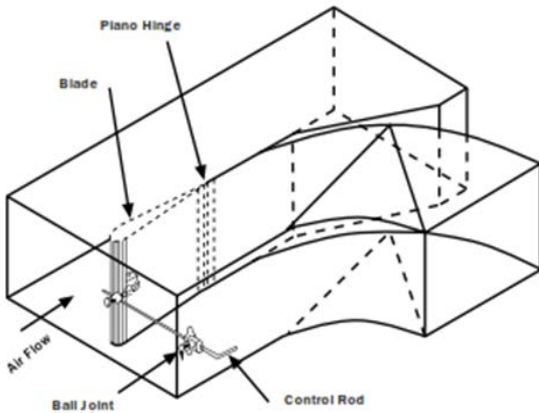
L = 85 mm



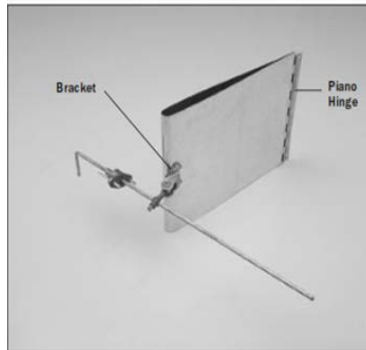
Product Descriptions & Design

Rectangular Ducts Fittings

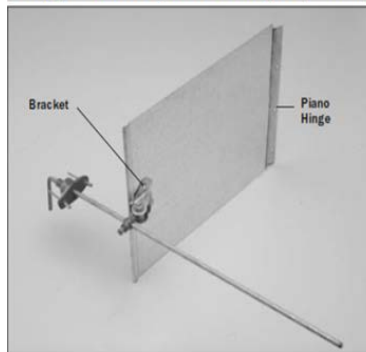
Splitter Damper



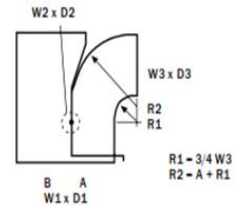
Aerofoil Blade Splitter Damper



Single Blade Splitter Damper (Standard)



Dimensions



Splitter Damper Length is Equal to 1.5 A

Where: A = 100 mm Min.

Trunk may be divided using:

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

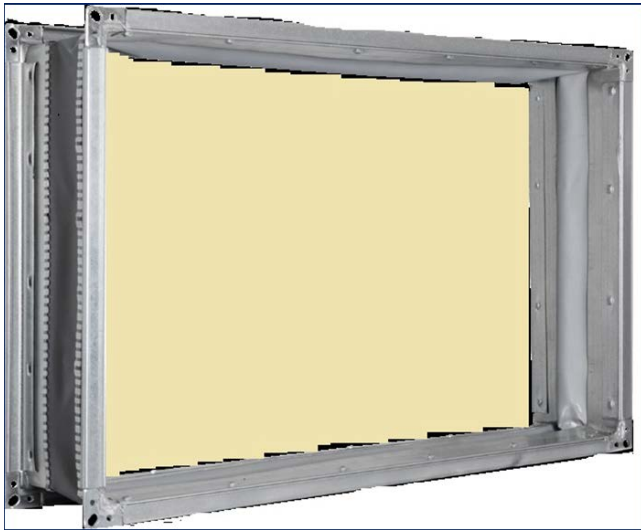
$$B = \left(\frac{W2 \times D2}{(W2 \times D2) + (W3 \times D3)} \right) W1$$

One rod up to 610 mm depth (D_1)
Two rods 635 mm to 1525 mm depth (D_2)
Three rods above 1525 mm depth (D_3)

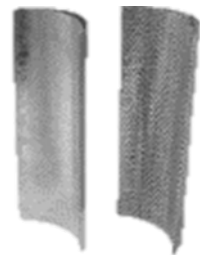
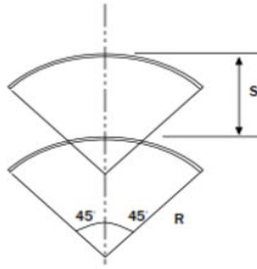
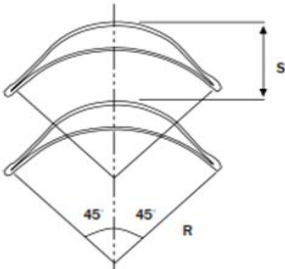
Product Descriptions & Design

▪ Rectangular Ducts Fittings

Rectangular flexible duct connector



Turning Vanes



Duct Size	Double Vane Schedule			
	Type	R	S	Ga
0-1000	Small	50	54	26
1000 Up	Large	115	83	24

* 1500 Up Segmented

Duct Size	Single Vane Schedule			
	Type	R	S	Ga
0-900	Small	50	38	24
900 Up	Large	115	83	22

* 1500 Up Segmented

Product Descriptions & Design

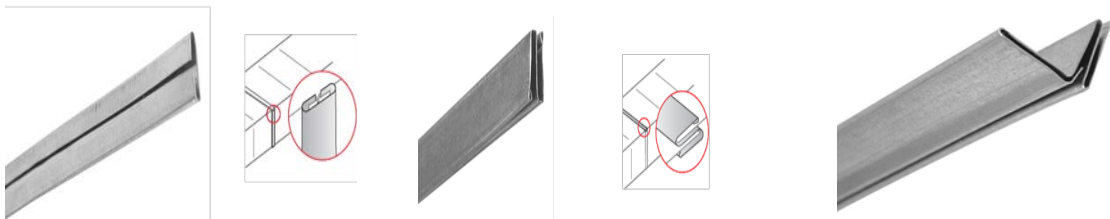
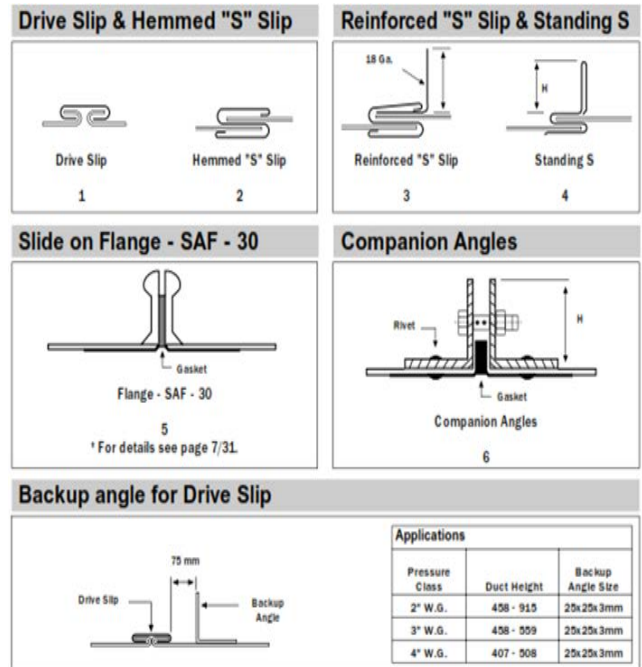
Duct Connectors

Transverse Joints

- ❑ Transverse joints shall be selected and used that are consistent with the static pressure class, applicable sealing requirements, materials involved, duct support intervals, and other provisions for proper assembly of ductwork outlined in the construction standards

The Following is the Transverse Connector Options:

- ❖ S & Drive slip (internally lined rectangular duct only) — T-1 drive slips with either T-6 hemmed S slips, T-11 standing S or T-13 standing S (internally-lined duct only)
- ❖ T-25b TDF Flanged Transverse Connections
- ❖ Slip-on flange (used as per SMACNA – at the request of the consultant)
- ❖ Welded angle iron frame





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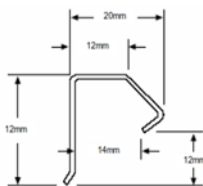
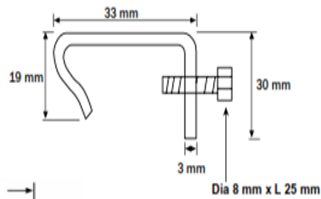
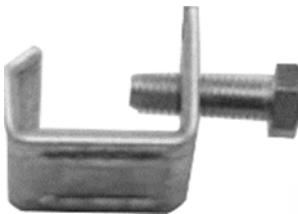
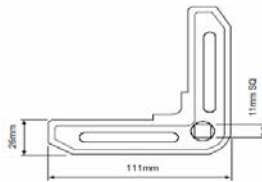
Duct & Air Outlets

Product Descriptions & Design

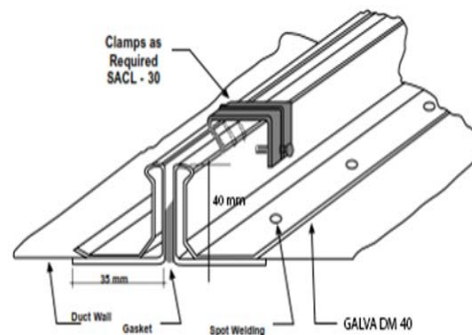
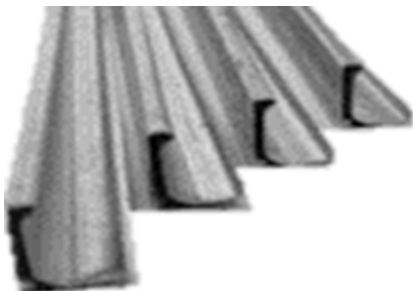
Duct Connectors

Transverse Joints

Corner Piece -30



Flange Joint System



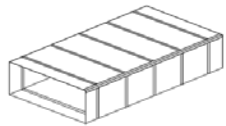
Product Descriptions & Design

Duct Connectors

Longitudinal Seams

- ❑ Seams shall be selected for the material, pressure classification, and other construction detail appropriate for the service As described earlier in the Rectangular Duct Construction Schedule.
- ❑ Seams shall be formed and assembled with proper dimension and proportion for tight and secure fit up. Notching shall be minimal and consistent with transverse joint make-up needs

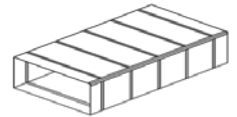
Pittsburgh Lock



18 Gauge & Up



Double Corner Seam



Up to 20 Gauge



Round Duct

▪ Round Straight Ducts

This tapered increaser is used to increase the diameter of the round pipe run. The larger end is crimped.

- Used to increase diameter of pipe from 3" to 6"
- Total reducer height is 6-7/8"
- Galvanized steel construction for durability and rust prevention



▪ Round Ducts Fittings

▪ Duct Start Collars

This non crimped start collar is used to start a round pipe run from a flat surface (main rectangular duct or plenum).

- ❑ Start a 5" pipe run from main rectangular duct
- ❑ Attaches to plenum using 5/8" flanges and tabs
- ❑ Installation depth of collar is 2-1/8"
- ❑ Galvanized steel construction for durability and rust prevention



▪ Duct Connectors

This flex connector is used to connect two sections of insulated flex duct. It is crimped on both ends for an easy fit.

- ❑ Connector used to connect 2 sections of insulated flex duct. Crimped on both ends for easy fit
- ❑ Galvanized steel construction for durability and rust prevention



Round Duct

• Duct Tees

This tee is used for 90-degree, same-diameter branch applications. It is designed for transitions with two incoming pipes at a 90-degree angle to one outgoing pipe.

- Total high Used for venting bath and kitchen fans as well as heating and air conditioning applications (for 90° branch with same diameters & Description)
- Transitions with 2 incoming pipes at a 90° angle to 1 outgoing pipe
- Total length of fitting is 12-1/2ght of fitting is 9-1/8"
- Galvanized steel construction for durability and rust prevention



• WYE Fitting

The wye is used primarily to transition from one pipe to 2 pieces.

The crimped outgoing pipe splits off into a 45-degree run.

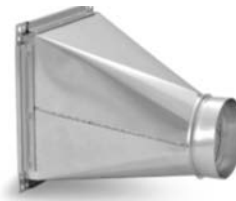
- ❑ Used primarily for heating and air conditioning application to transition from 1 pipe to 2 pieces
- ❑ Outgoing pipe splits off into 45° run
- ❑ Total height of fitting is 12-9/16"
- ❑ Tapered design with top collar centered on the taper
- ❑ Galvanized steel construction for durability and rust prevention



Round Duct

• Duct Round to Square

This transition piece changes the ductwork shape from rectangular to round. The fitting helps route the ventilation ductwork with liberal modifications of all duct dimensions and offsetting the center line by any value in both directions. The round connector is male in the standard version.



• Duct Elbows

This 90-degree spiral elbow is used for spiral pipe only. The slip fit slides inside the round pipe without crimping.

- 90° angle for round pipe - slip fit slides inside round pipe without crimping
- Galvanized steel construction for durability and rust prevention

This 45-degree adjustable angle is used to adjust the direction of a heat run for round pipe from zero to 45 degrees.

- Adjust direction of a heat run for round pipe from 0 to 45 degrees
- Easy-rotate design allows for small or big changes
- Galvanized steel construction for durability and rust prevention



Round Duct

- **Duct Reducers & Increases**

This tapered reducer is used to decrease the diameter of the round pipe run. The smaller end is crimped.

- ❑ Used to decrease diameter of pipe from 6" to 3"
- ❑ Total reducer height is 6-5/8"
- ❑ Galvanized steel construction for durability and rust prevention

