



The School Board of Broward County, Florida
Office of Facilities & Construction
1643 North Harrison Parkway
Sunrise, FL 33323

(754) 321-1500

Document 01330a (00 62 11)-Submittal Form

To:
(Project consultant)

Submittal
No.: 013

Date: 12/26/2019

☐ Resubmittal

Attn: Vanessa Smith Torres
Project No: P.001866
Project Title: GOB Renovations
Facility Name: River Glades Elementary School
Location No: 2891

(One Submittal item per form)

We hereby submit:

Qty	Reference Number	Title/Description/ Manufacturer	Spec Section Title, Paragraph/ Drawing Detail Reference
1	013	Metal Ducts	SBBC No= 15.810 CSI No= 23 3113

- ☒ Submitted for Review and Approval.
☐ Resubmitted for Review and Approval.

- ☐ Complies with contract requirements.
☐ Will be available to meet construction Schedule.
☐ Reviewed, coordinated and approved by the Contractor.

Other remarks concerning submittal:

Lunacon Construction Group

Clara Uzcatagui

Digitally signed by Clara Uzcatagui
DN: cn=Clara Uzcatagui, o=Lunacon Construction Group,
c=us, email=uzcatagui@lunaconcorp.com, c=US
Date: 2019.12.26 12:28:48 -0500

Integ

Contractor:

By: (Signature)

Contractor:

Retain copy for Project Files

To:
(Contractor)

Date
Received: _____

Date
Returned: _____

FROM:

Project Consultant

The referenced submittal has been/is:

- ☐ Approved
☐ Approved as Noted
☐ Disapproved/Resubmit
☐ Not Subject to Review
☐ Incomplete/Resubmit
- ☐ Provide file copy with corrections identified.
☐ Full Point by Point Comparative Data Required for Evaluation and Approval Process.
☐ Other:

By: (Signature)

Project Consultant:

Distribution: ☐ Contractor ☐ Owner ☐ Retain Copy for Project File

Submittal

Job: P.001866

GOB Renovation

Riverglades Elementary School

Location No: 2891

Spec Section No: 15.810

Submittal No: 013

Revision No:

Sent Date: 12/26/2019

Submittal Title: Metal Ducts

Contractor: Lunacon Construction Group

16890 S Dixie Highway

Miami FL 33157

(786) 293-0035

☒ Approved ☐ Revise & Resubmit

☐ Rejected ☐ Approved As Noted

Contractor's Stamp



Checked as to General Arrangement and Conformity with Contract Document.

Subcontractor is Advised That Failure Of The Architect-Engineer Or The General Contractor To Direct And Correct An Error In The Material Submitted For Approval Or Errors In Either Size Or Location Dimensions, Does Not In Any Way Relieve The Supplier/ Subcontractor Of His Responsibility To Comply In All Details With The True Meaning A Intent Of The Contract Documents.

By: Clara Uzategui Date: 12/26/2019
Submittal: 15.810

A	<input checked="" type="checkbox"/>	NO EXCEPTIONS
B	<input type="checkbox"/>	EXCEPTIONS AS NOTED
C	<input type="checkbox"/>	RESUBMIT
D	<input type="checkbox"/>	REJECTED
E	<input type="checkbox"/>	FOR INFORMATION ONLY

SUBMITTAL REVIEW

This review is for conformance with the information given in the design concept expressed in the Contract Documents. The Contractor remains responsible for:

- 1 Compliance with the Contract Documents
- 2 Confirming and correlating quantities and dimensions
- 3 Selecting fabrication processes and techniques of construction
- 4 Coordination of this Work with other trades
- 5 Performing this Work in a safe and satisfactory manner
- 6 Compliance with the Contractor's construction schedule
- 7 All other provisions of the Agreement

It is understood that the Architect's notation on the submittal is not to be construed as an authorization for additional work or additional cost.

VDS

VIA DESIGN STUDIO
AA26002071

Reviewed: VST

Checked: VST
Date: 01/17/20

Architect's Stamp

Engineer's Stamp

JOHNSON, AVEDANO, LOPEZ, RODRIGUEZ & WALEWSKI
ENGINEERING GROUP, INC.

SUBMITTAL REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND CONTRACT DOCUMENTS.

MARKING OR COMMENTS SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, NOR DEPARTURES THEREFROM. THE CONTRACTOR REMAINS RESPONSIBLE FOR DETAILS AND ACCURACY FOR CONFIRMING AND CORRELATING ALL QUANTITIES, FOR ASCERTAINING THAT DIMENSIONS OF EQUIPMENT AND MATERIALS SUBMITTED WILL FIT WITHIN THE ALLOCATED SPACE, JOB CONDITIONS AND DIMENSIONS, FOR SELECTING FABRICATING PROCESS, FOR TECHNIQUES OF ASSEMBLY AND CONSTRUCTION AND FOR PERFORMING THE WORK IN A SAFE MANNER.



REVIEWED



REVIEWED AS
NOTED



REVISE AND
RESUBMIT



REJECTED

REVIEWED BY: John G. Cumper, P.E.


SUBMITTAL No.: 013 - Metal Ducts

DATE: Jan 17, 2020.

VIA Design Studio, LLC
Vanessa Smith Torres

Rectangular Duct and Fittings

- ❖ All rectangular duct and fittings are fabricated using galvanized steel in accordance with the 3rd edition 2005 SMACNA Duct Construction Standards.
- ❖ Fabrication of rectangular duct and fittings using aluminum, stainless steel, or black iron is available at client's request or as necessary in accordance with project plans.



Galvanized	26-18 gauge	A-653	G90
Aluminum	0.04	ASTM B209	3003 H14
Stainless Steel	18 gauge	A-240	316L
Black Iron	16 gauge	A-569	N/A

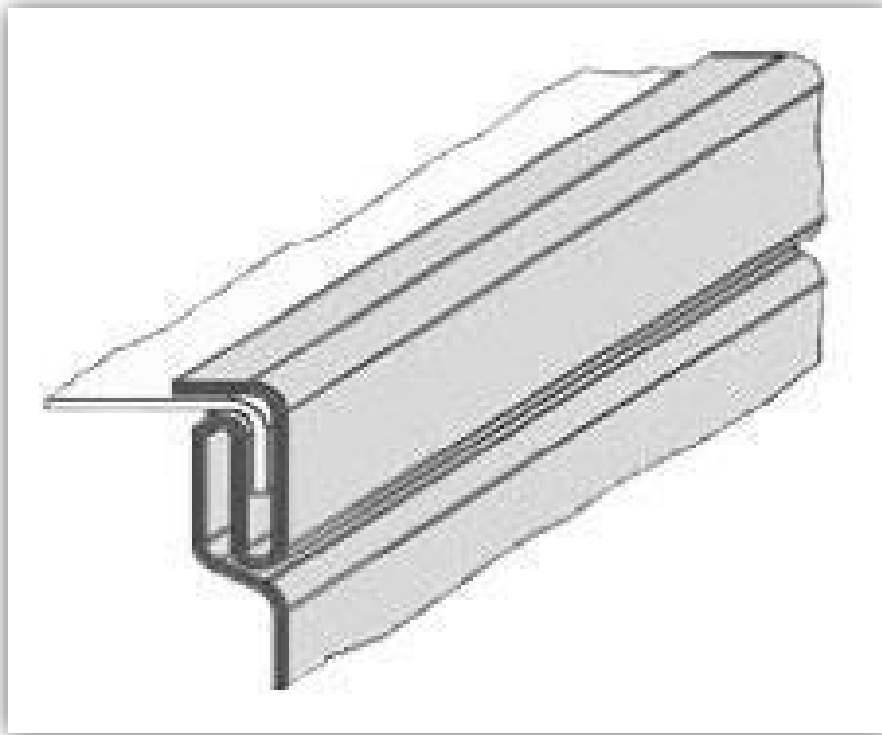
- ❖ Fabrication using other material standards that is not mentioned above is available upon client's request otherwise specified on project plans.
- ❖ All fabricated duct and fittings using 20-26 gauge are beaded.
- ❖ Straight duct and fittings are assembled otherwise are unassembled upon request.



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Phone: 305 749 5686 Mobile: 305 987 9301
Website: dnduct.com



Longitudinal Seam



- ❖ Fabrication of rectangular duct and fittings is completed using a Pittsburgh Lock Seam.
- ❖ Duct sections are secured and leak-free under pressure.

TDX Connection

All fabrication of rectangular duct and fittings that use a TDX connection is based on the 3rd edition 2005 SMACNA Duct Construction Standards.



Benefits

- ❖ Reduces leakage.
- ❖ Can be assembled and disassembled on the ground without damage to duct or fitting.
- ❖ No additional sealing is necessary.

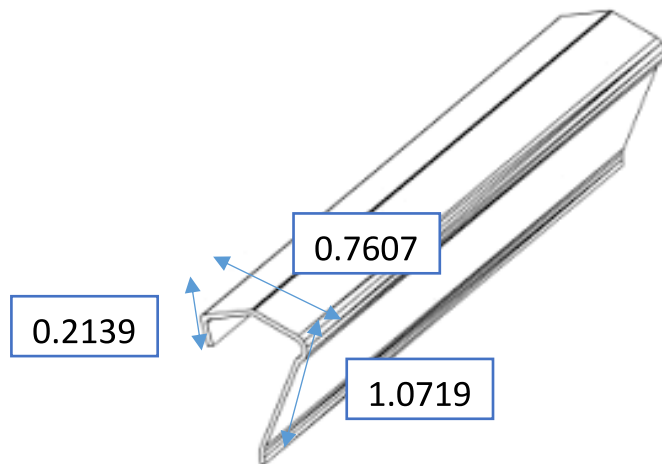
TDX Corner

- ❖ Corners used to complete the TDX flange connection is the Cornermatic Corner which is manufactured by Ductmate Industries.
- ❖ The corner is made out of 16 Gauge galvanized steel.
- ❖ It has a hole for 3/8" carriage bolt.
- ❖ Used to install into 26-18 gauge TDX flanges.



Cleats

- ❖ Cleats used in TDX flange connection is the Ductmate Versa Cleat.
- ❖ The cleat is snapped on between TDX connections when ductwork is installed.
- ❖ It is manufactured using 22 gauge galvanized steel.
- ❖ It is provided in union with the ductwork that requires a TDX connection.
- ❖ The cleat's opening has the following dimensions.
 - Height-1.0719"
 - Width- .7607"
 - Length-.2139"



4" W.G. STATIC POS. OR NEG.
(Galvanized Steel and Stainless Steel Ductwork)

Duct Size	Duct Gauge	Joint Length	Wide Side Connector	Narrow Side Connector
0 - 10"	26	59"	STANDING SLIP T-11 26 GA	FLAT DRIVE T-1 24 GA
11 - 12"	26	59"	T.D.C. T-25a	T.D.C. T-25a
13 - 22"	24	56"	T.D.C. T-25a	T.D.C. T-25a
23 - 28"	22	56"	T.D.C. T-25a	T.D.C. T-25a
29 - 42"	22	56"	T.D.C. W/ C.T.R. & J.T.R. T-25a	T.D.C. W/ C.T.R. & J.T.R. T-25a
43 - 60"	20	56"	T.D.C. W/ C.T.R. & J.T.R. T-25a	T.D.C. W/ C.T.R. & J.T.R. T-25a
61- 72"	20	56"	T.D.C. W/ 2 C.T.R & J.T.R T-25a	T.D.C. W/ 2 C.T.R & J.T.R T-25a
73 - 96 "	18	56"	T.D.C. W/ 2 C.T.R & J.T.R T-25a	T.D.C. W/ 2 C.T.R & J.T.R T-25a
97 – 120"	18	56"	T.D.C. W/ CENTER A.R & J.T.R T-25a	T.D.C. W/ CENTER A.R & J.T.R T-25a

J.T.R – Joint Tie Rod.

C.T.R – Center Tie Rod.

A.R. – Angle Reinforcement.

Tie Rods are ½" EMT.

If MPT(Mid-point Tie Rods) are used, the reinforcement spacing is based on 2-1/2".



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6" W.G. STATIC POS. OR NEG.
(Galvanized Steel and Stainless Steel Ductwork)

Duct Size	Duct Gauge	Joint Length	Wide Side Connector	Narrow Side Connector
0 - 8"	26	59"	STANDING SLIP T-11 26 GA	FLAT DRIVE T-1 24 GA
9 - 12"	24	56"	T.D.C. T-25a	T.D.C. T-25a
13 - 24"	22	56"	T.D.C. T-25a	T.D.C. T-25a
25 - 26"	22	56"	T.D.C. T-25a	T.D.C. T-25a
27 - 30"	22	56"	T.D.C. W/ C.T.R. T- 25a	T.D.C. W/ C.T.R. T- 25a
31 - 36"	20	56"	T.D.C. W/ C.T.R. T- 25a	T.D.C.W/ C.T.R. T- 25a
37 - 60"	20	56"	T.D.C. W/ C.T.R. & J.T.R. T-25a	T.D.C. W/ C.T.R. & J.T.R. T-25a
61 - 72"	18	56"	T.D.C. W/ C.T.R. & J.T.R. T-25a	T.D.C. W/ C.T.R. & J.T.R T-25a
73 - 84"	18	56"	T.D.C. W/ 2C.T.R. & J.T.R. T-25a	T.D.C. W/ 2 C.T.R. &J.T.R. T-25a
85 - 96"	16	56"	T.D.C. W/ 2C.T.R. & J.T.R. T-25a	T.D.C. W/ 2 C.T.R. &J.T.R. T-25a

J.T.R – Joint Tie Rod.

C.T.R – Center Tie Rod.

A.R. – Angle Reinforcement.

Tie Rods are ½" EMT.

If MPT(Mid-point Tie Rods) are used, the reinforcement spacing is based on 2-1/2".



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Slip & Drive Connection

Available Connections



Hemmed "S"



Standing "S"



Plain "S"



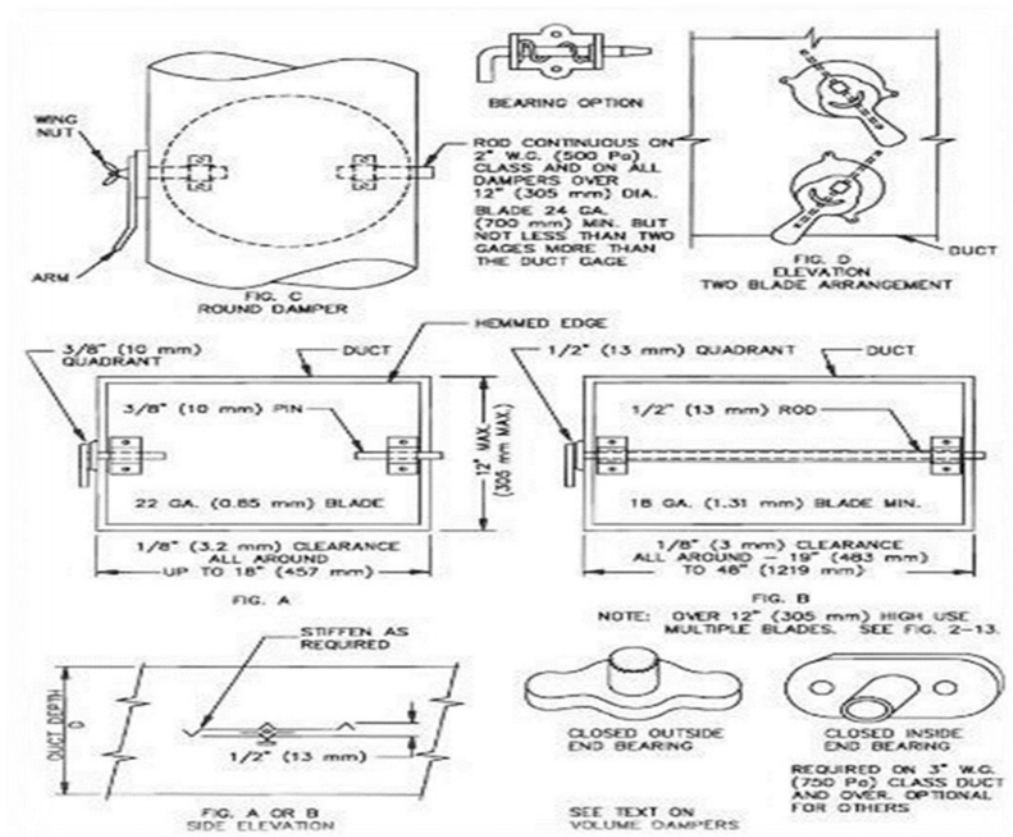
Drive Slip



- ❖ Slip and Drives are cut in accordance with the 3rd edition 2005 SMACNA Duct Construction Standards.
- ❖ Bundles of 10 are provided in accordance with the project or as requested by client.
- ❖ Rigid and leak-proof connection.
- ❖ Slips and drives are commonly cut at 3', 5', and 8' lengths.
- ❖ Are cut using 26 and 24 gauge galvanized metal.

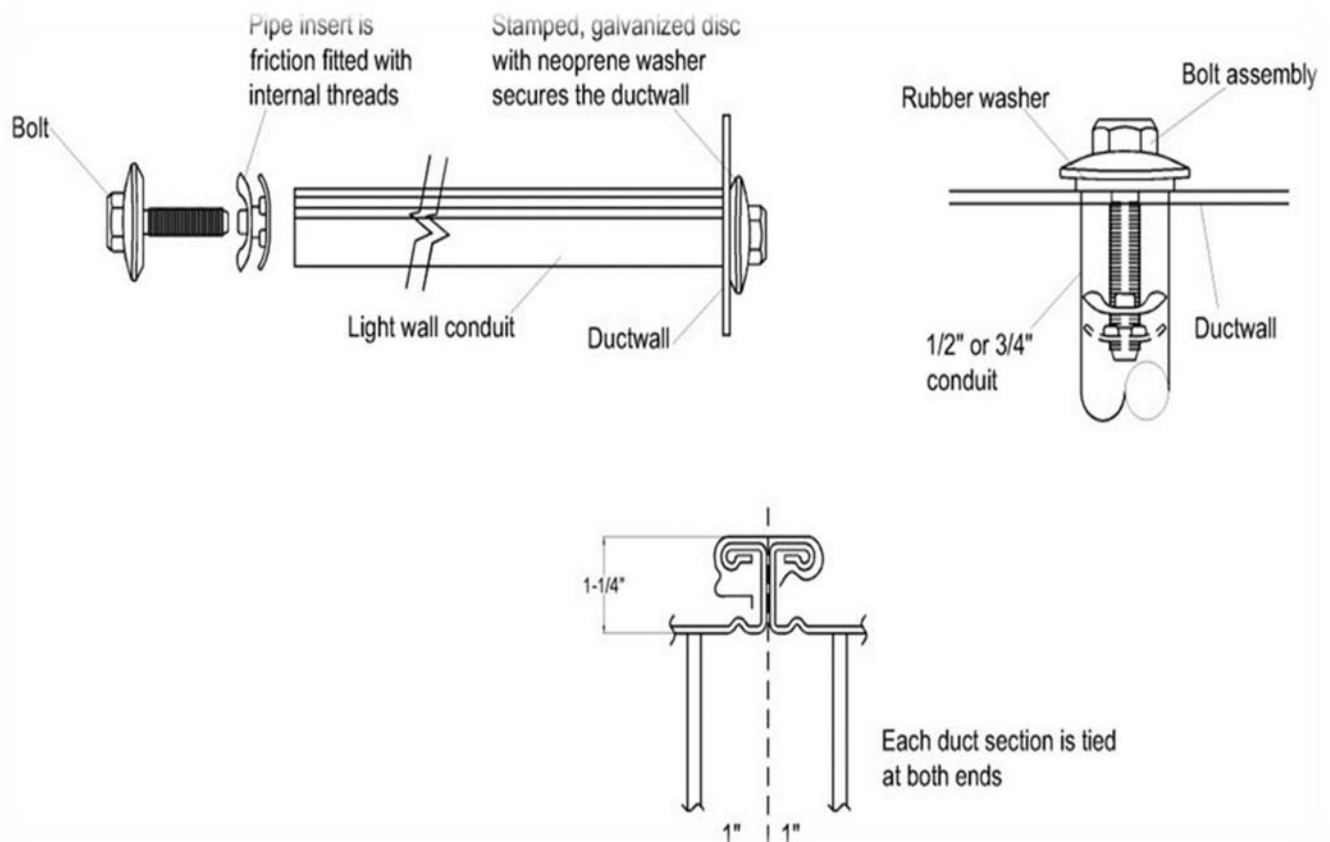
Volume Damper

- ❖ All fabricated volume dampers are in accordance with the requested sizes and types specified in project's plan.
- ❖ Damper blade is made using galvanized steel.
- ❖ Damper bearings is made out of stainless steel which causes it to have low friction which reduces the torque when turning the blade.
- ❖ The blade pin is made out of 0.040 aluminum.



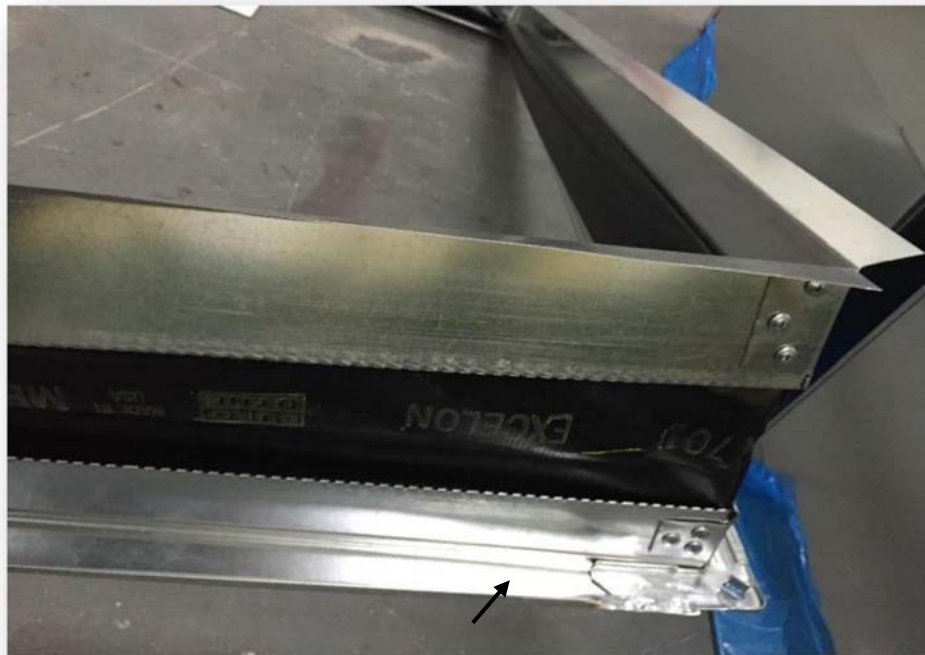
Tie Rod Reinforcement

- ❖ Tie rod is cut to length in accordance to the duct dimensions.
- ❖ Tie rod reinforcements are used for both mid panel and joint reinforcement.
- ❖ Tie rod are manufactured using $\frac{3}{4}$ " conduit with $\frac{5}{16}$ " threaded inserts at each end.
- ❖ All specifications regarding the implementation of the tie rod are conducted in accordance with the 3rd edition 2005 SMACNA Duct Construction Standards.

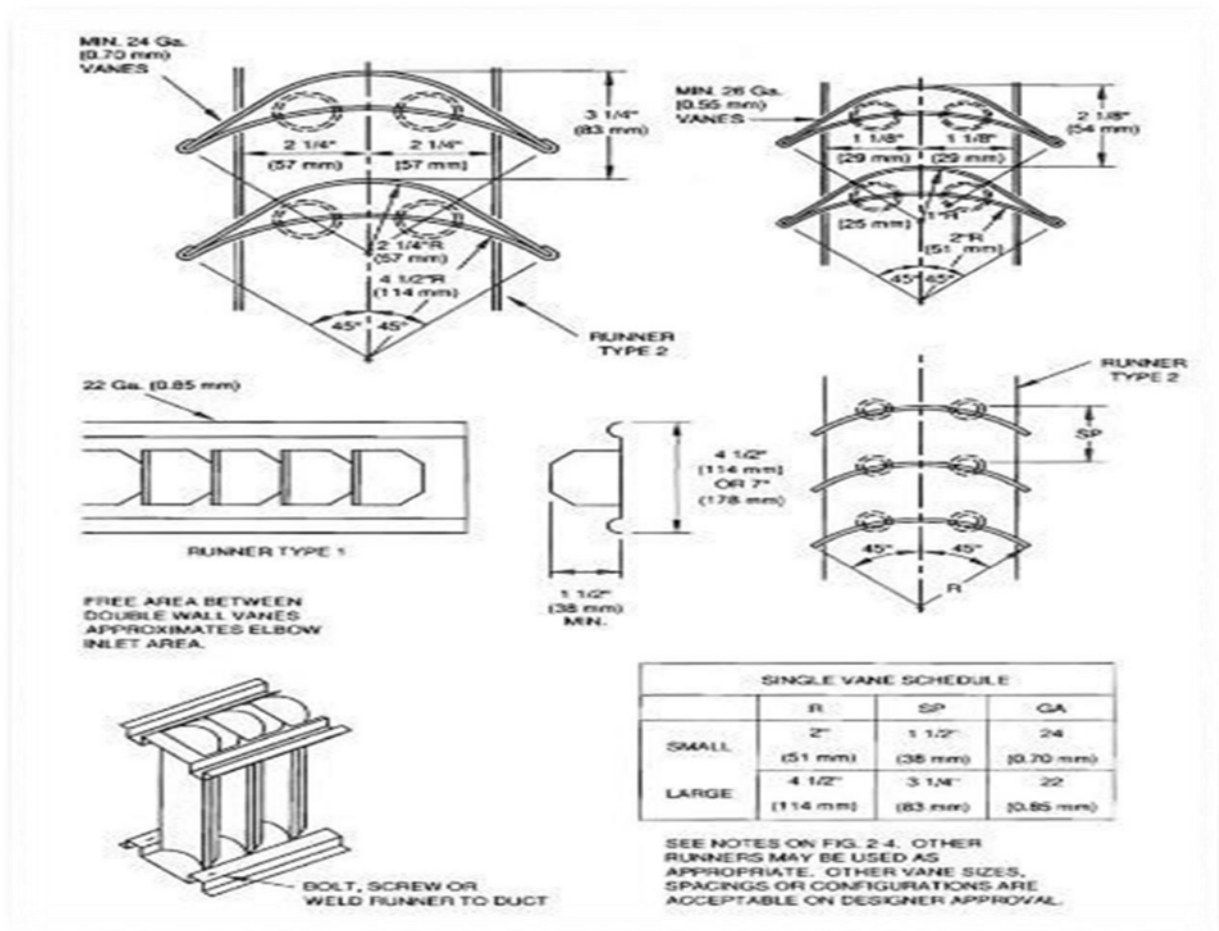


Flexible Duct Connector

- ❖ Fabricated using G-90 galvanized steel.
- ❖ Corners are clinched to completely conform the connector.
- ❖ TDX and slip & drive connections are available in accordance with requests.
- ❖ Fabric used is Excelon and meets NFPA-90A and NFPA-90B.
- ❖ Flexible duct has a flame retardant coating and has a waterproof seal.
- ❖ Fabric has a high tear strength and high abrasion.

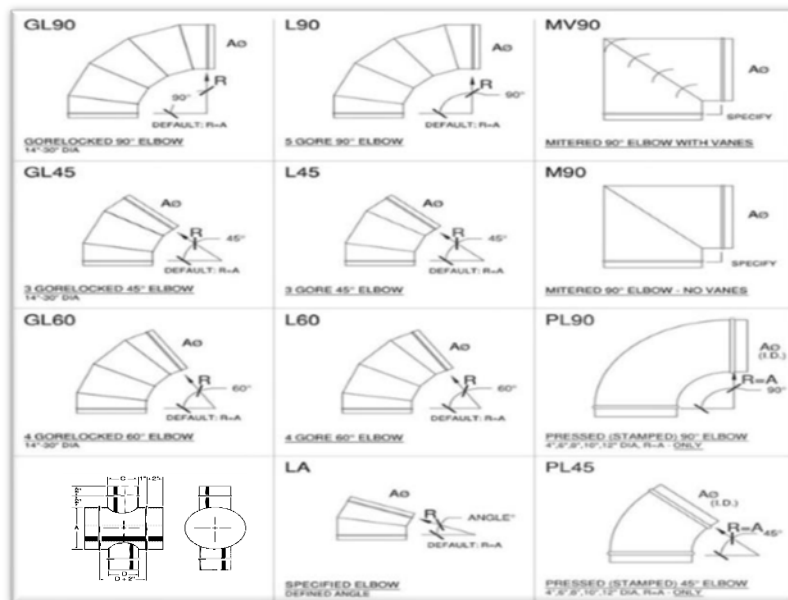


Turning Vanes



Spiral Duct: Single Wall

- ❖ Pipe and fittings are fabricated using G-90 galvanized steel in accordance with 3rd edition 2005 SMACNA Duct Construction Standards.
 - **Pipe**
 - Spiral lock-seam on sizes 3”-64”.
 - **Fittings**
 - Elbows will have a radius of 1.5 x standard diameter.
 - Available in 5-90 degrees.
 - All fittings will have a standing seam using a gore lock.



Up to 10” W.G. Positive Pressure
(Single Wall)

Duct Diameter	Pipe Gauge	Fittings Gauge	Pipe Length
3-16”	26	24	10’ or cut to length
17-18”	24	24	10’ or cut to length
19-22”	24	22	10’ or cut to length
24-26”	24	22	10’ or cut to length
28-36”	22	20	10’ or cut to length
38-50”	20	20	10’ or cut to length
52-64”	18	18	10’ or cut to length



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