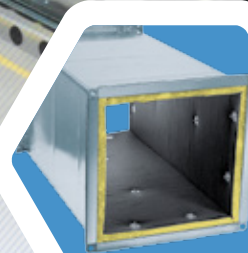
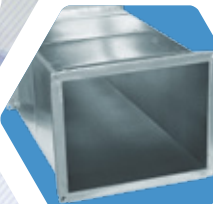


Rectangular Ducts



Assure Success with Customer Together



ABOUT US

FMC Metal Factory, founded in 2021 in the city of Jeddah, for its Excellence, Engineering, Professionalism, and Experience in the field of fabrication of HVAC duct and its Accessories. The company has been a forerunner in the Construction field with his vast experience, commitment, adoption of new technologies and challenges by emerging as one of a key player. It offers a wide range of services for Supply, Installation, Testing and Commissioning in HVAC field. The group is leading under the supreme guidance of Mr. Mohamed Abdul Rahman Farhat, who has a long life experience in the Saudi market.

Vision

Our ambition is to amplify the presence of FMC as a recognized company in the field of construction. We aspire to extent our professional services abroad in the coming years.

Mission

Form valuable long-term relationships with our clients and partners.

Manage large and complex projects.

Be a reliable company.

Compete successfully in the Construction market of the region with high efficiency, professionalism and honesty in order to maintain, our outstanding reputation.

Objective

Our aim is to enhance the lifestyle of the communities we serve through consistent, timely, efficient and added value delivery of engineered, innovative, and tailor-made technology solutions that never fails to exceed expectations

Commitment

Constantly strive to ensure that amidst all the projects exists a great deal of passion and commitment to provide quality services and to deliver clients satisfaction.

Maintain leadership in project management capability.

Provide an open and flexible approach towards the needs of our clients by listening and respecting their views and by being ahead of emerging trends.

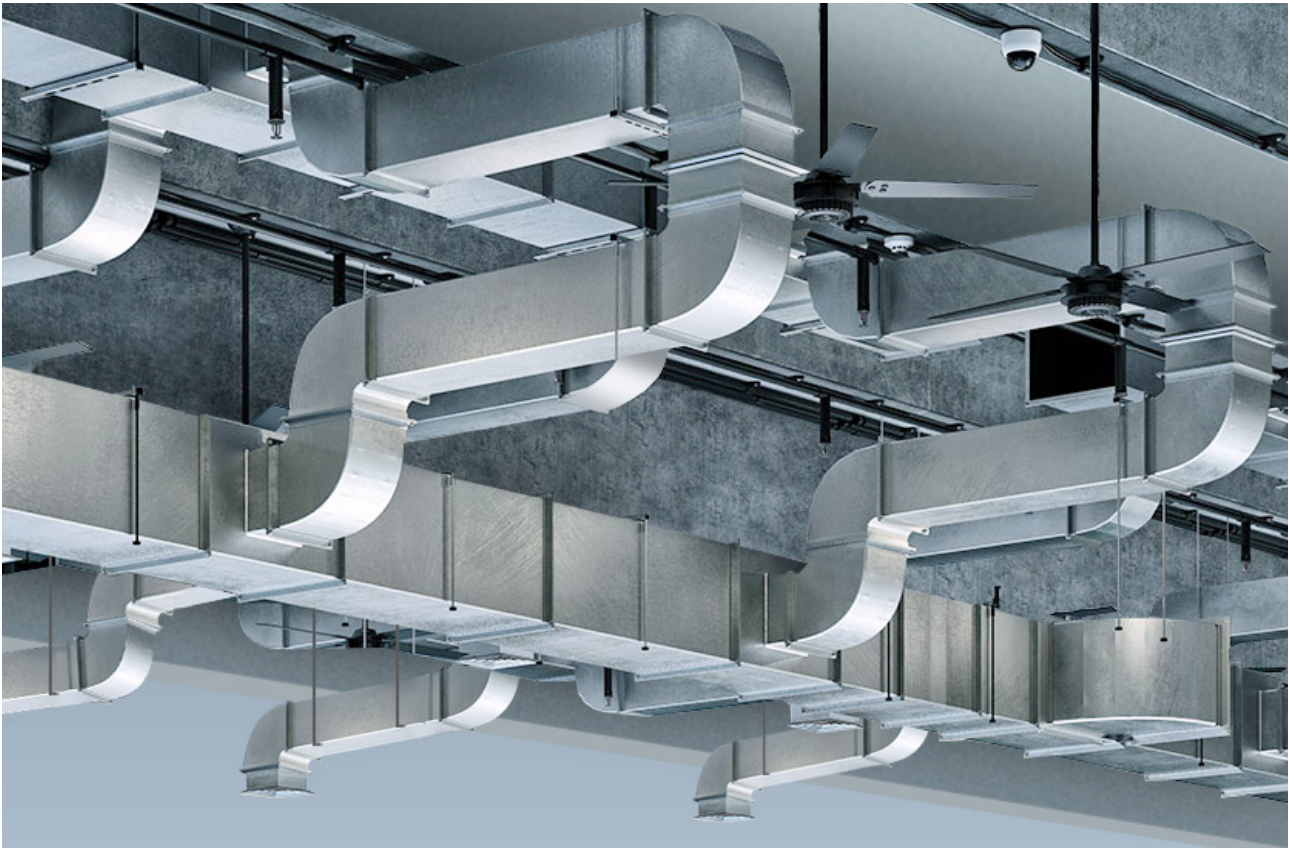
Deliver superior value through our consistent implementation of advanced methods and state of the art solutions.

Our Team

FMC's work force is the main asset which represent and implement all projects in professional manors due to the on going training programs that we provide to our, head office employees, engineers, supervisors, technicians, drivers, labors and all of our working force whom reflect their professions on sites.

OUR PRODUCTS MAINTAINING THE HIGHEST INTERNATIONAL STANDARDS.

INTRODUCTION



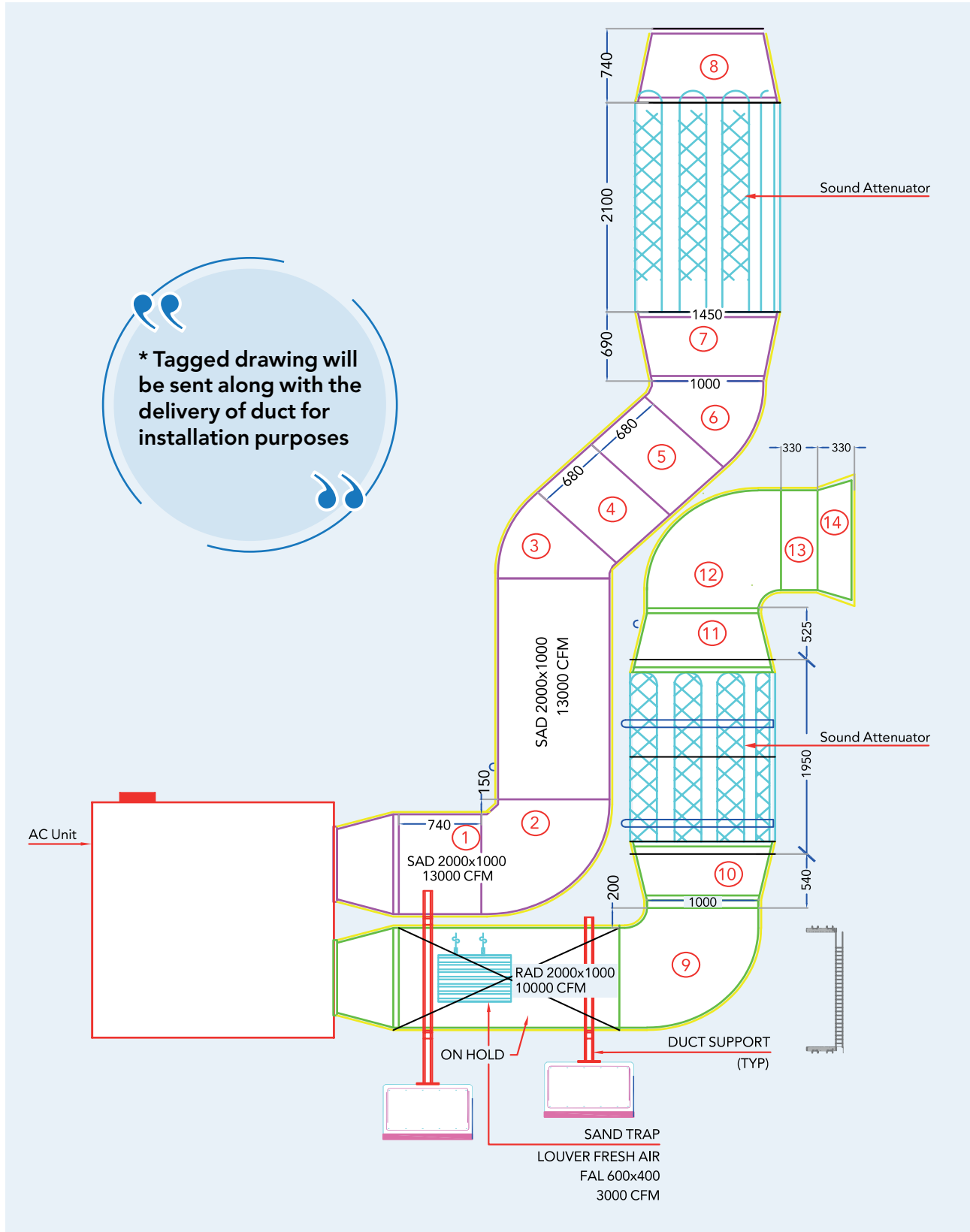
FMC Metal factory equipped with latest technology to meet the growing demands with a prompt action by serving the best quality products, keen to establish themselves a pioneer in the market with the help of its well qualified engineers, skilled technicians and producing the best quality of products. FMC manufactures the ducts and it's accessories compliance to SMACNA and DW/144 construction schedule by adhering to internal QA/QC guidelines to serve with best of the best products. FMC Metal Factory active under ISO Certification for the scope of manufacturing Ducts works, Fittings & Related products which approved by the main Consultants and contracting companies.



FABRICATION PROCEDURES

Fabrication of Rectangular Ducts shall be based on Drawing provided by the client, by following below procedures:

1. Preparing Tag. Drawings for each Job order



FABRICATION PROCEDURES

2. Release the cutting list and fabrication reports, for customer review

Job Order


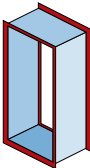
Project: PROJECTS/6. FMC CONSTRUCTION COMPANY/NEOM PROJECT - 2ND PHASE/RISER DUCT
Job Name: 156-21 - RISER DUCT - UNIT 01

Date: 9/27/2022
Time: 9:15 AM
User: Abdul Haseeb:

Sr. #	Item Name	Material X Gauge	End 1 Size	End 2 Size	End 3 Size	Length/ Angle	Item Qty	Connector Name	Insul. Status	Insul. Material	Insul. Area	Item. Area	Corners	Weight	Notes
1	Straight	Galvanised x 1.2	2000x1000	2000x1000		740 (mm)	1	Angle Bar 50x50x5 GAL, Angle Bar 50x50x5 GAL	Off		0.0	4.68	0	44.88	Supply Air
2	Radius Bend	Galvanised x 1.2	1000x2000	1000x2000		90	1	Angle Bar 50x50x5 GAL, Angle Bar 50x50x5 GAL	Off		0.0	10.68	0	102.48	Supply Air
3	Radius Bend	Galvanised x 1.2	1000x2000	1000x2000		45	1	Angle Bar 50x50x5 GAL, Angle Bar 50x50x5 GAL	Off		0.0	4.96	0	47.64	Supply Air
4	Straight	Galvanised x 1.2	2000x1000	2000x1000		680 (mm)	1	Angle Bar 50x50x5 GAL, Angle Bar 50x50x5 GAL	Off		0.0	4.30	0	41.32	Supply Air
5	Straight	Galvanised x 1.2	2000x1000	2000x1000		680 (mm)	1	Angle Bar 50x50x5 GAL, Angle Bar 50x50x5 GAL	Off		0.0	4.30	0	41.32	Supply Air
6	Radius Bend	Galvanised x 1.2	1000x2000	1000x2000		45	1	Angle Bar 50x50x5 GAL, Angle Bar 50x50x5 GAL	Off		0.0	4.96	0	47.64	Supply Air
7	Taper	Galvanised x 1.2	1000x2000	1450x2400		690 (mm)	1	Angle Bar 50x50x5 GAL, Angle Bar 50x50x5 GAL	Off		0.0	5.64	0	54.14	Supply Air
8	Taper	Galvanised x 1.2	1000x2000	1450x2400		740 (mm)	1	Angle Bar 50x50x5 GAL, Angle Bar 50x50x5 GAL	Off		0.0	5.99	0	57.47	Supply Air
9	Radius Bend	Galvanised x 1.2	1000x2000	1000x2000		90	1	Angle Bar 50x50x5 GAL, Angle Bar 50x50x5 GAL	Off		0.0	11.57	0	111.11	Return Air
10	Taper	Galvanised x 1.2	1000x2000	1300x2300		540 (mm)	1	Angle Bar 50x50x5 GAL, Angle Bar 50x50x5 GAL	Off		0.0	4.24	0	40.71	Return Air
11	Taper	Galvanised x 1.2	1000x2000	1300x2300		525 (mm)	1	Angle Bar 50x50x5 GAL, Angle Bar 50x50x5 GAL	Off		0.0	4.14	0	39.75	Return Air
12	Radius Bend	Galvanised x 1.2	1000x2000	1000x2000		90	1	Angle Bar 50x50x5 GAL, Angle Bar 50x50x5 GAL	Off		0.0	11.57	0	111.11	Return Air
13	Straight	Galvanised x 1.2	2000x1000	2000x1000		330 (mm)	1	Angle Bar 50x50x5 GAL, Angle Bar 50x50x5 GAL	Off		0.0	2.14	0	20.56	Return Air
14	Bell Mouth	Galvanised x 1.2	2000x1000	2200x1200		330 (mm)	1	Angle Bar 50x50x5 GAL, WireMesh	Off		0.0	2.69	0	25.78	Return Air
							14				0.0	81.87	0	785.90	

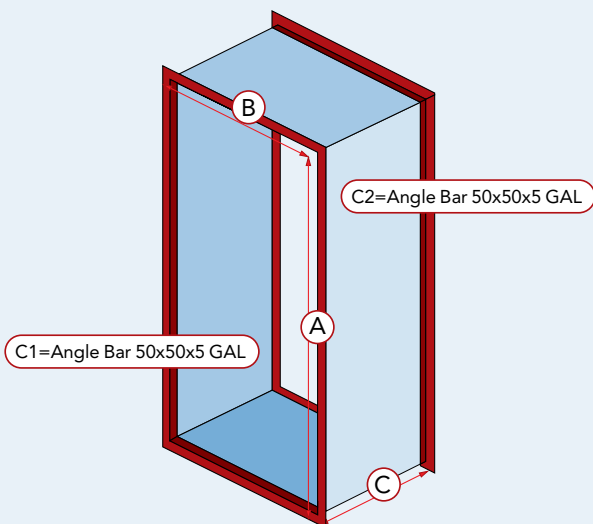
FABRICATION PROCEDURES

3. Printing labels for each item showing complete details (Item number, specification, dimensions, project name, customer name ...etc.)

1	:: Supply Air		
Project:	PROJECTS/6. FMC CONSTRUCTION COMPANY/ NEOM PROJECT - 2ND PHASE/RISER DUCT		
Job Name: 156-21 - RISER DUCT - UNIT 01			
Material & Gauge: Galvanised x 1.2		Item Area: 4.7 (sq m)	
Name: Straight			
END 1: 2000 x 1000 (mm)	Angle Bar 50x50x5 GAL		
END 2: 2000 x 1000 (mm)	Angle Bar 50x50x5 GAL		
Length / Angle: 740 (mm)	Insulation:		

4. In case of more details required, 3-D sketches can be provided to ensure high accuracy

Profiled Item Print

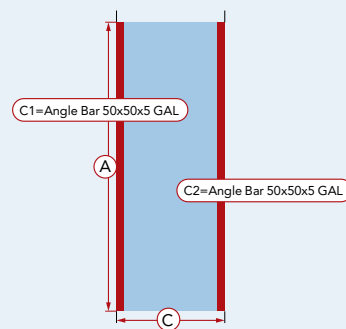
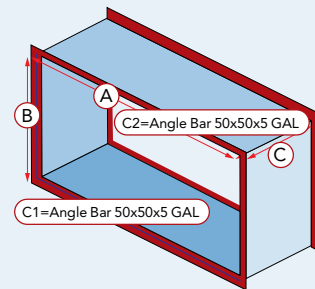


Dimensions (mm)


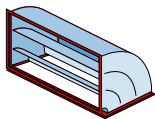
A = Width = 2000.0
B = Depth = 1000.0
C = Length = 740.0

Connectors

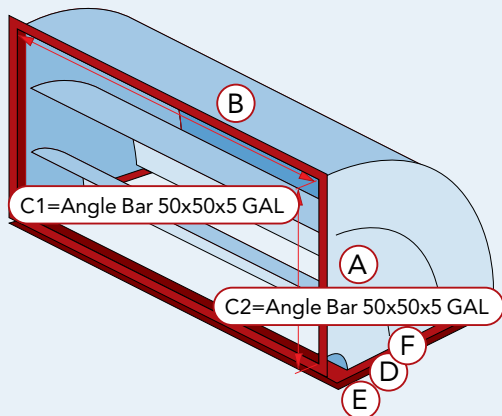
C1 = Angle Bar 50x50x5 GAL
C2 = Angle Bar 50x50x5 GAL



FABRICATION PROCEDURES

2	:: Supply Air		
Project:	PROJECTS/6. FMC CONSTRUCTION COMPANY/ NEOM PROJECT - 2ND PHASE/RISER DUCT		
Job Name: 156-21 - RISER DUCT - UNIT 01			
Material & Gauge: Galvanised x 1.2		Item Area: 10.1 (sq m)	
Name: Radius Bend			
END 1: 1000 x 2000 (mm)	Angle Bar 50x50x5 GAL		
END 2: 1000 x 2000 (mm)	Angle Bar 50x50x5 GAL		
Length / Angle: 90	Insulation:		

Profiled Item Print

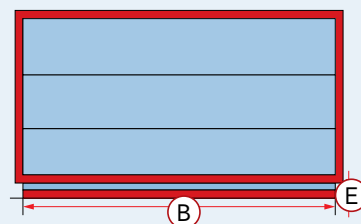
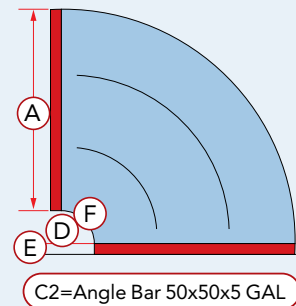
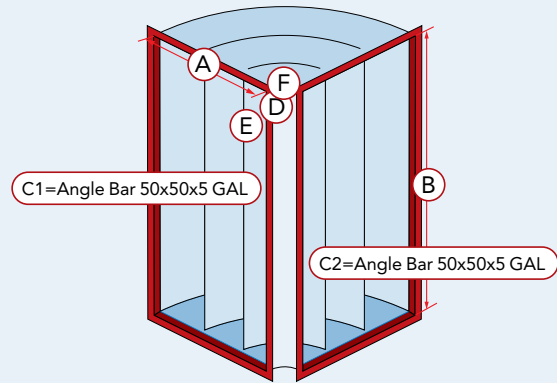


Dimensions (mm)


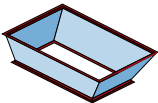
A = Width = 1000.0
 B = Depth = 2000.0
 C = Angle = 90.0
 A = Top Extension = 0.0
 B = Bottom Extension = 0.0
 C = Inner Radius = 150.0

Connectors

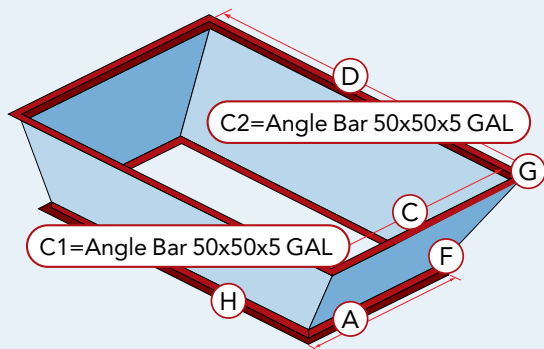
C1 = Angle Bar 50x50x5 GAL
 C2 = Angle Bar 50x50x5 GAL



FABRICATION PROCEDURES

7	:: Supply Air		
Project:	PROJECTS/6. FMC CONSTRUCTION COMPANY/ NEOM PROJECT - 2ND PHASE/RISER DUCT		
Job Name: 156-21 - RISER DUCT - UNIT 01			
Material & Gauge: Galvanised x 1.2	Item Area: 5.3 (sq m)		
Name: Taper			
END 1: 1000 x 2000 (mm)	Angle Bar 50x50x5 GAL		
END 2: 1450 x 2400 (mm)	Angle Bar 50x50x5 GAL		
Length / Angle: 690 (mm)	Insulation:		

Profiled Item Print

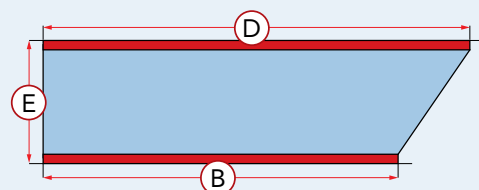
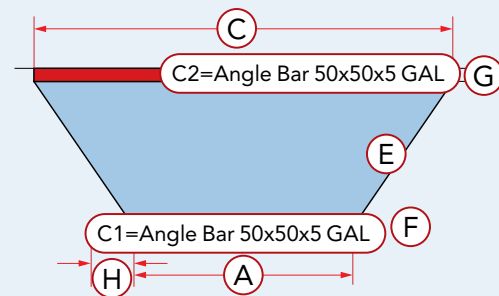
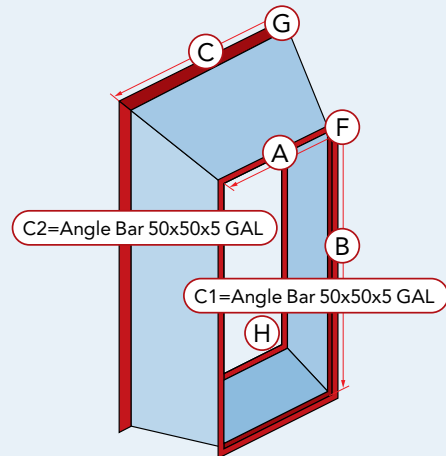


Dimintions (mm)

A = Width In = 1000.0
 B = Depth In = 2000.0
 C = Width Out = 1450.0
 D = Depth Out = 2400.0
 E = Length = 690.0
 F = Extension In = 50.0
 G = Extension Out = 50.0
 H = Offset Width = Central
 I = Offset Depth = Flat Bottom
 J = Angle = 34.1

Connectors

C1 = Angle Bar 50x50x5 GAL
 C2 = Angle Bar 50x50x5 GAL



FABRICATION PROCEDURES

5. Preparing material summary reports to release the job order for manufacturing process

Area Summary (Manufactured)

Ref: Job No : 0
Contract Name: 156-21 - RISER DUCT - UNIT 01 Date: 9/24/2022

Section: None, Material: Galvanised, Type: Straights

Description	Qty	Length	Size	0.6 (sq m)	0.8 (sq m)	1.0 (sq m)	1.2 (sq m)
Straight	2.4 (m)	2.4 (m)	2000 X 1000				15.4
		2.4		0.0	0.0	0.0	15.4

Grand Totals:

Material	0.6 (sq m)	0.8 (sq m)	1.0 (sq m)	1.2 (sq m)
Ductwork: Galvanized				78.0
	0.0	0.0	0.0	78.0

Section: None, Material: Galvanised, Type: Straights

Description	Qty	Length/Angle (mm)	Size	0.6 (sq m)	0.8 (sq m)	1.0 (sq m)	1.2 (sq m)
Bell Mouth	1	330 (mm)	2000 X 1000				2.5
Radius Bend	1	90	2000 X 1000				10.1
Radius Bend	2	45	2000 X 1000				9.4
Radius Bend	2	90	2000 X 1000				21.8
Taper	1	690 (mm)	2000 X 1000				5.3
Taper	1	740 (mm)	2000 X 1000				5.6
Taper	1	540 (mm)	2000 X 1000				4.0
Taper	1	525 (mm)	2000 X 1000				3.9
				0.0	0.0	0.0	62.6

Connector List -- Breakdown

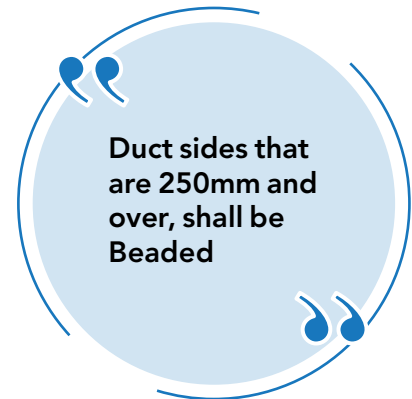
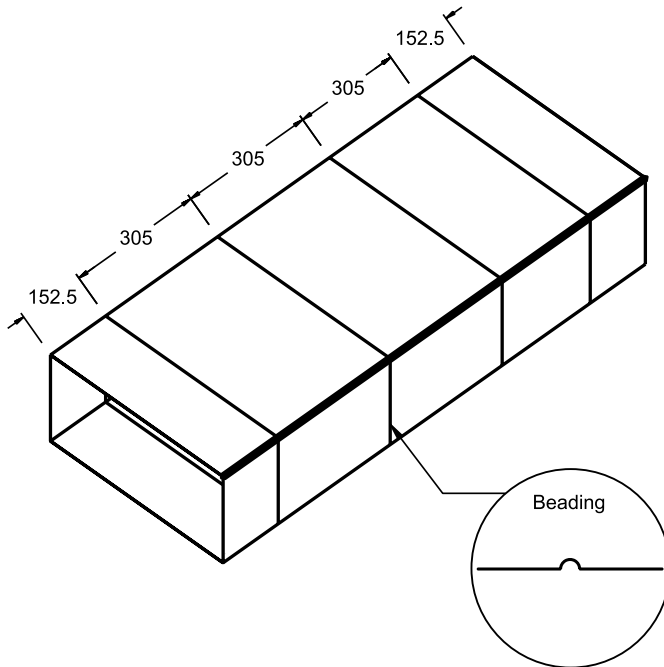
Project: PROJECTS/6. FMC CONSTRUCTION COMPANY/NEOM PROJECT - 2ND PHASE/RISER DUCT User: Abdul Haseeb:
Contract Name: 156-21 - RISER DUCT - UNIT 01 Date: 9/24/2022

Section: None, Material: Galvanised, Type: Straights

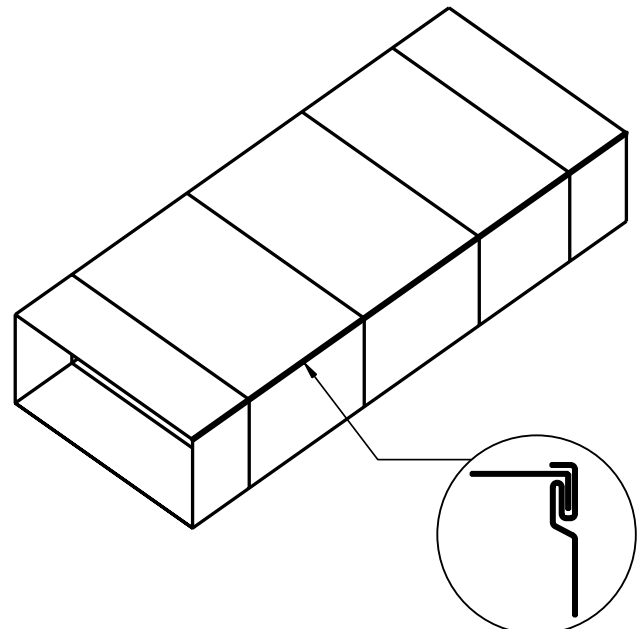
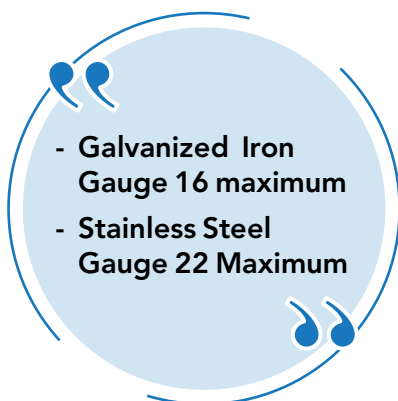
Item No	Qty	Width	Depth	Cut	Len1	Len2	Length (m)	Corners	Bolts
2, 2, 3, 3, 6, 6, 7, 8, 9, 9, 10, 11, 12, 12	14	1000	2000	28	1005.0	2105.0	87.08	0	0
10, 11	2	1300	2300	4	1305.0	2405.0	14.84	0	0
7, 8	2	1450	2400	4	1455.0	2505.0	15.84	0	0
1, 1, 4, 4, 5, 5, 13, 13, 14	9	2000	1000	18	2105.0	1005.0	55.98	0	0
							173.74	0	0

LONGITUDINAL SEAMS

Straight Ducts are Beaded



Straight Ducts are Beaded

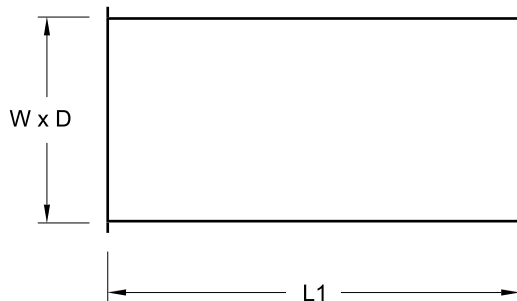


Materials Used for Ductworks:

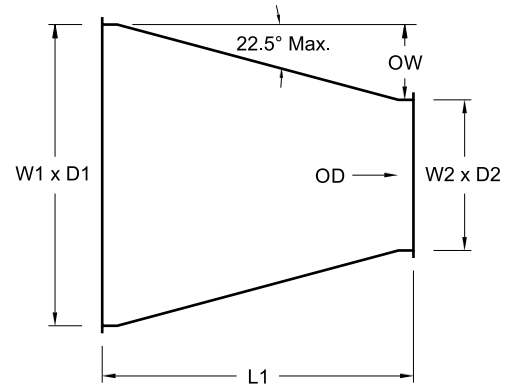
- **Galvanized Steel** : (Standard) L.F.Q. Complying with ASTM A653 and Having G90 Coating Designation.
- **Stainless Steel** : (Optional) Complying with ASTM A240M / A480M, Grade 304, 304L, 316 & 316L.
- **Aluminum Metal** : (Optional) Complying with ASTM B209, Alloy 3003, Temper H14.

STRAIGHT DUCT & FITTINGS

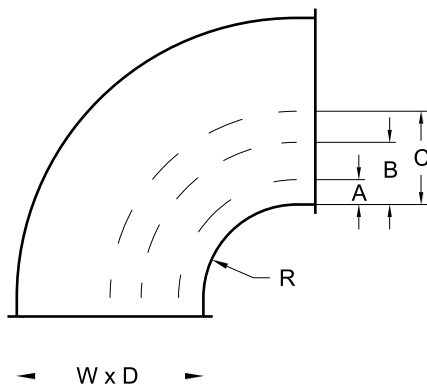
Straight



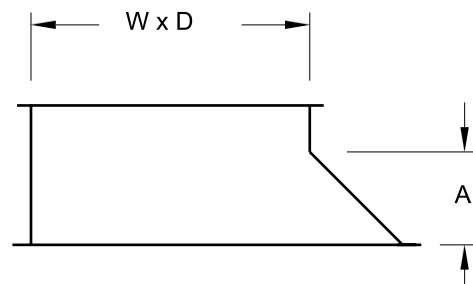
Taper



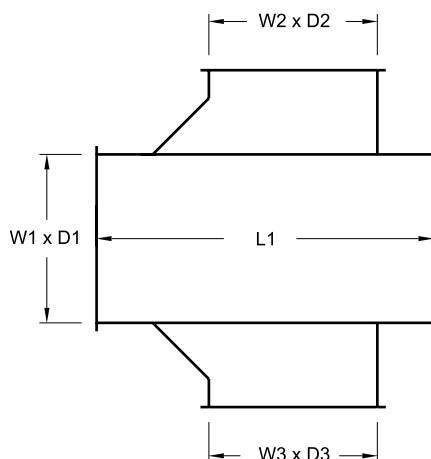
Radius Bend



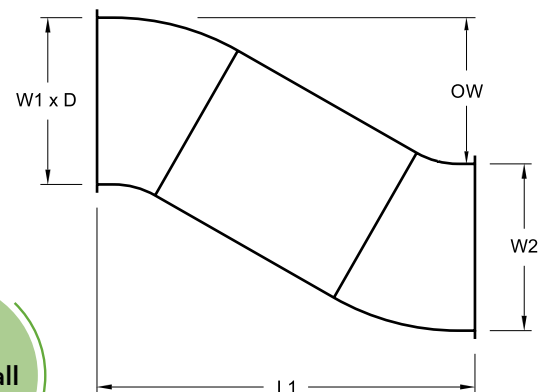
Shoe Branch



Straight + 2 Branches



Radius Offset



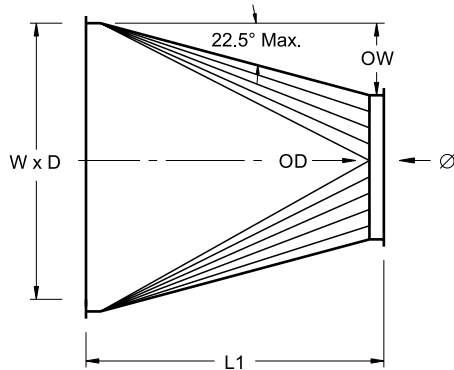
Available
Double Wall
Ducts

Materials Used for Ductworks:

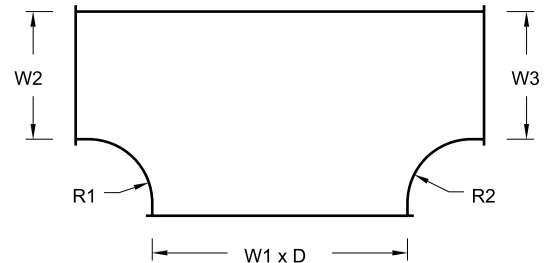
- **Galvanized Steel** : (Standard) L.F.Q. Complying with ASTM A653 and Having G90 Coating Designation.
- **Stainless Steel** : (Optional) Complying with ASTM A240M / A480M, Grade 304, 304L, 316 & 316L.
- **Aluminum Metal** : (Optional) Complying with ASTM B209, Alloy 3003, Temper H14.

STRAIGHT DUCT & FITTINGS

Square to Round

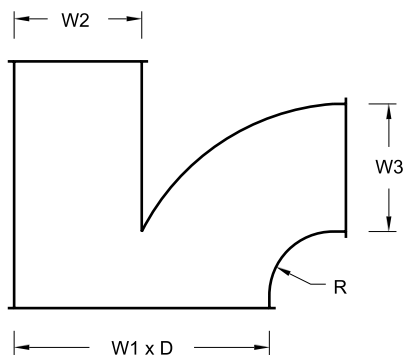


Radius Tee



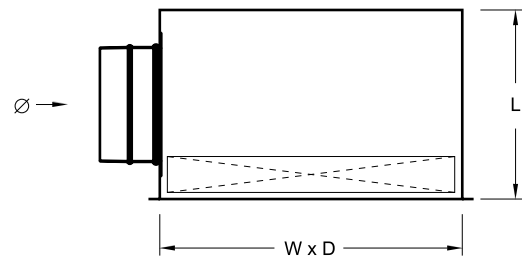
Side Branch

Splitter Damper Optional

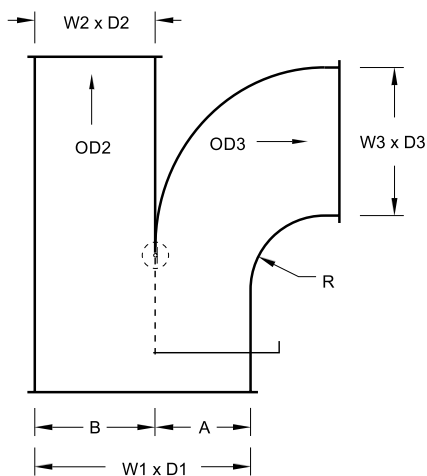


Plenum Box

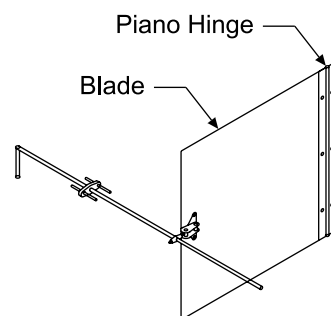
Side or Top Connection



Splitter Damper



Single Blade Splitter Damper

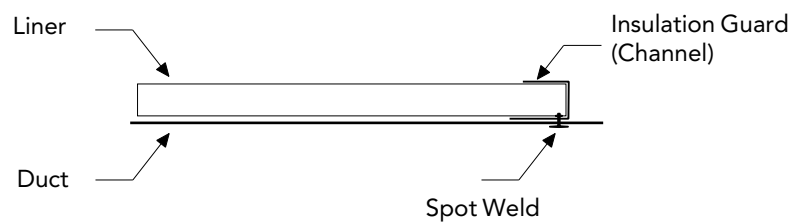
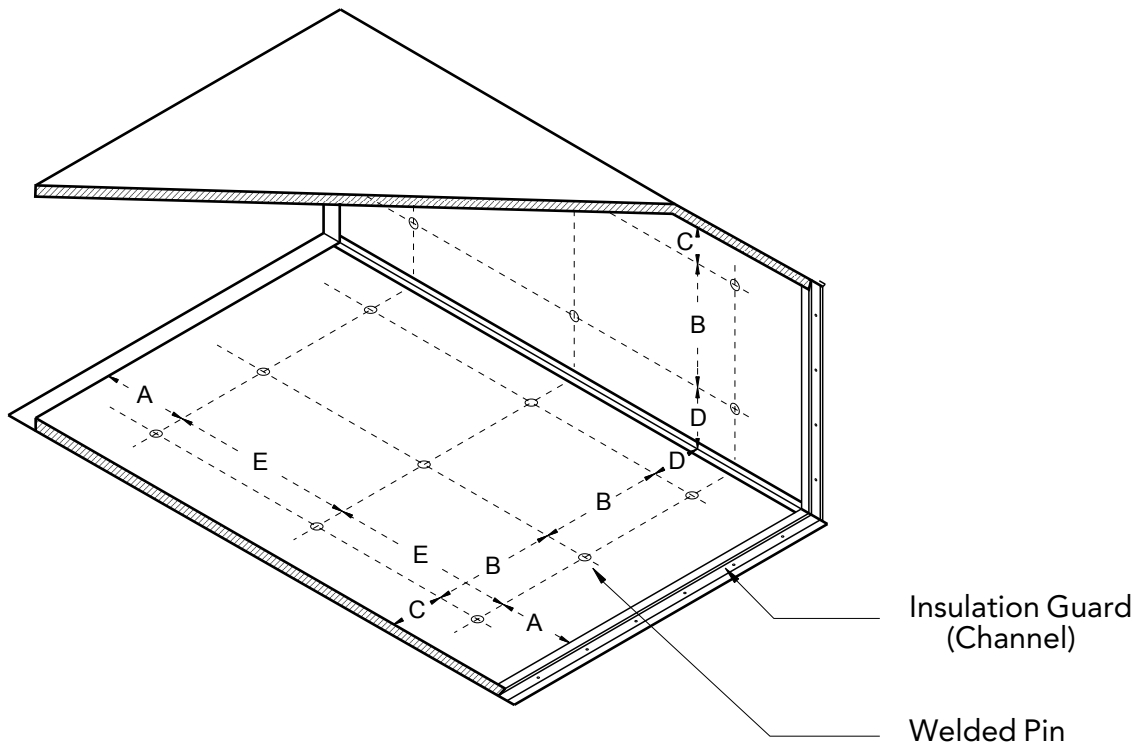


Available
Double Wall
Ducts

Materials Used for Ductworks:

- **Galvanized Steel** : (Standard) L.F.Q. Complying with ASTM A653 and Having G90 Coating Designation.
- **Stainless Steel** : (Optional) Complying with ASTM A240M / A480M, Grade 304, 304L, 316 & 316L.
- **Aluminum Metal** : (Optional) Complying with ASTM B209, Alloy 3003, Temper H14.

DUCT LINING

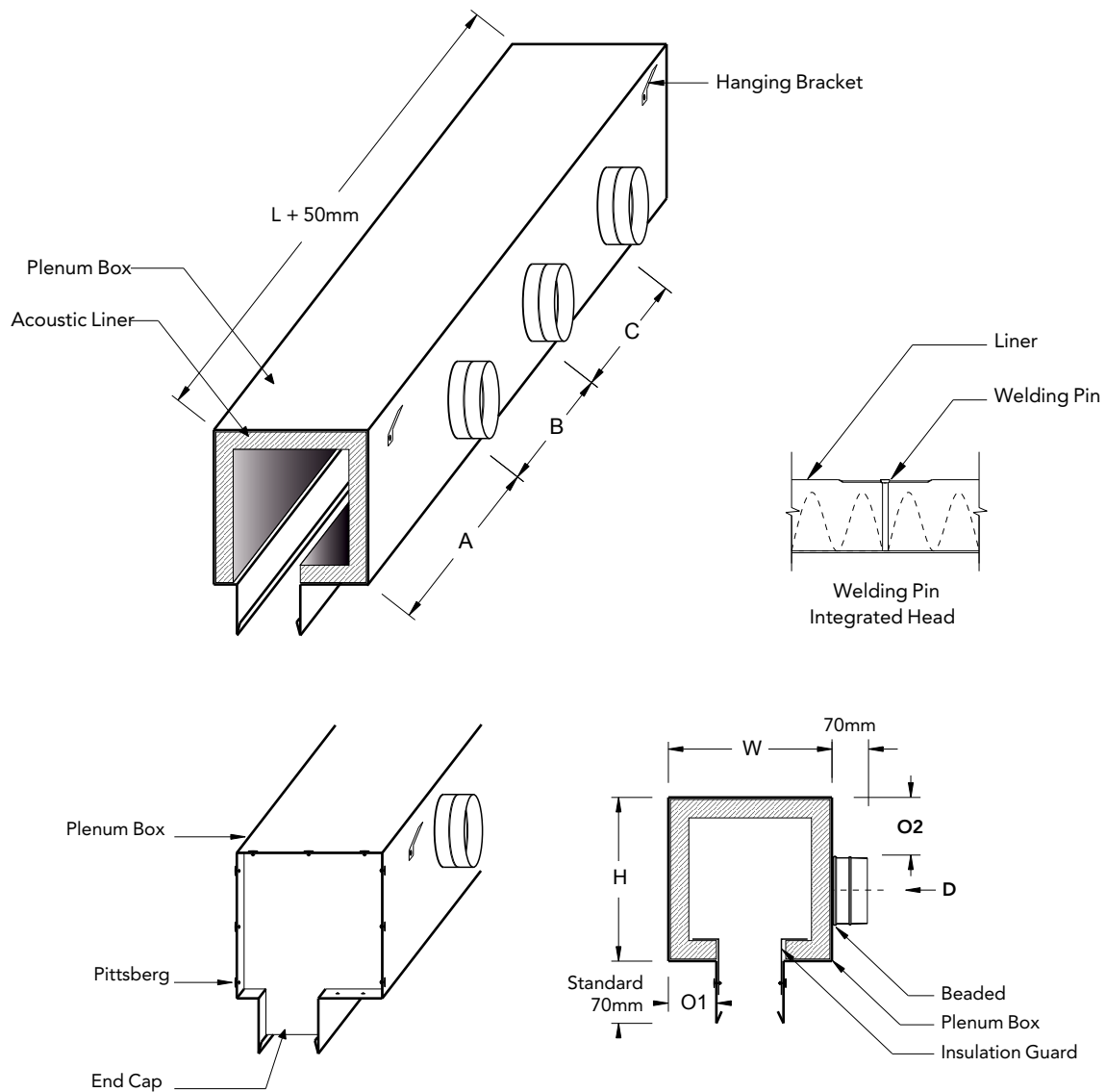


Materials Used for Ductworks:

- **Galvanized Steel** : (Standard) L.F.Q. Complying with ASTM A653 and Having G90 Coating Designation.
- **Stainless Steel** : (Optional) Complying with ASTM A240M / A480M, Grade 304, 304L, 316 & 316L.
- **Aluminum Metal** : (Optional) Complying with ASTM B209, Alloy 3003, Temper H14.

PLENUM BOX

- * **Plenum Box:** Fabricated of 24 Gauge Galvanized Iron - Standard.
- * **Acoustic Liner:** Clean Liner 25mm, 24 or 48 kg/m³, is faced with a Black, Strong, Durable, Dimensionally Stable Woven Glass Fabric.
- * **Optional:**
 - 1- Volume Control Damper.
 - 2- Inside Insulation Covered with Galvanized Perforated Sheet Insuring Full Protection.
 - 3- Acoustic Liner Thickness & Density as per Client Request.
 - 4- Rubber Insulation.

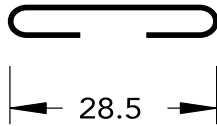


Materials Used for Ductworks:

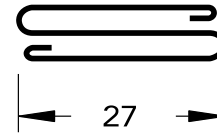
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- **Stainless Steel** : (Optional) Complying with ASTM A240M / A480M, Grade 304, 304L, 316 & 316L.
- **Aluminum Metal** : (Optional) Complying with ASTM B209, Alloy 3003, Temper H14.

TRANSVERSE JOINTS

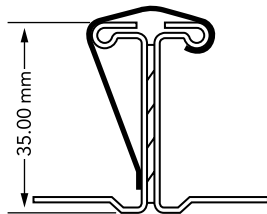
Drive Slip



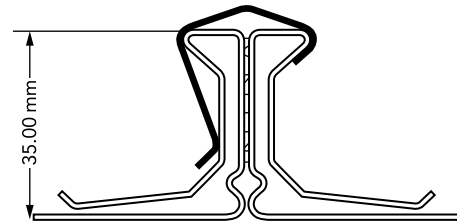
Hemmed "S" Slip



TDC Flange

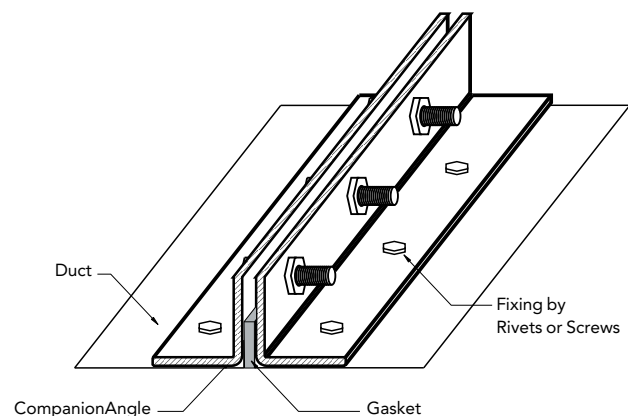
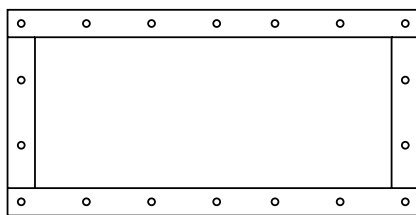


Slide on Flange



Angle Flanged Joint

- Duct Ends Turn up of 10mm
- Fixing Bolts at Each Corner and intermediately Centers at 150mm



Companion Angle & Reinforcement are made of Hot Dip Galvanized Steel Angle

Materials Used for Ductworks:

- **Galvanized Steel** : (Standard) L.F.Q. Complying with ASTM A653 and Having G90 Coating Designation.
 - **Stainless Steel** : (Optional) Complying with ASTM A240M / A480M, Grade 304, 304L, 316 & 316L.
 - **Aluminum Metal** : (Optional) Complying with ASTM B209, Alloy 3003, Temper H14.
- Note:** Standard Length of Hemmed "S", Standing "S", C Cleat & Drive Slip is 1220mm.

DUCTWORK CONSTRUCTION SCHEDULE

TABLE - 1

Construction Schedule 1 Inch W.G As Per SMACNA

MAX.DUCT DIMENSION	U.S. GAGE	LONGITUDINAL CONNECTION	INTERMEDIATE REINFORCEMENT	TRANSVERSE CONNECTION	SPACING
0-300	26	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	HEMMED S-SLIP (GA.24) C-DRIVE (GA.24)	1220
305-900	26	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
905-1200	24	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
1250-1500	22	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120

TABLE - 2S

Construction Schedule 2 inch W.G as per SMACNA / S&C

MAX.DUCT DIMENSION	U.S. GAGE	LONGITUDINAL CONNECTION	INTERMEDIATE REINFORCEMENT	TRANSVERSE CONNECTION	SPACING
0-300	26	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	HEMMED S-SLIP (GA.24) C-DRIVE (GA.24)	1220
305-700	26	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
705-900	24	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
905-1000	22	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
1050-1200	20	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
1250-1500	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	DM-35	1220
1550-2100	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	COMPANION ANGLE 50x50x5mm	1200
2150-2400	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	COMPANION ANGLE 50x50x5mm	1200
2450-2700	16	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	COMPANION ANGLE 50x50x5mm	1200

TABLE – 2T

Construction Schedule 2 inch W.G as per SMACNA / TDC

MAX.DUCT DIMENSION	U.S. GAGE	LONGITUDINAL CONNECTION	INTERMEDIATE REINFORCEMENT	TRANSVERSE CONNECTION	SPACING
0-700	26	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
705-900	24	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
905-1000	22	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
1050-1200	20	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
1250-1500	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	DM-35	1220
1550-2100	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	COMPANION ANGLE 50x50x5mm	1200
2150-2400	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	COMPANION ANGLE 50x50x5mm	1200
2450-2700	16	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	COMPANION ANGLE 50x50x5mm	1200

DUCTWORK CONSTRUCTION SCHEDULE

TABLE – 3

Construction Schedule 3 inch W.G as per SMACNA

MAX.DUCT DIMENSION	U.S. GAGE	LONGITUDINAL CONNECTION	INTERMEDIATE REINFORCEMENT	TRANSVERSE CONNECTION	SPACING
0-750	24	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
755-900	22	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
905-1000	20	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
1050-1200	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	DM-35	1220
1250-1800	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	COMPANION ANGLE 50x50x5mm	1200
1850-2100	16	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	COMPANION ANGLE 50x50x5mm	1200
2150-2400	16	PITTSBURGH (LOCK SEAM)	COMPANION ANGLE 50x50x5mm @600 max. c-c	COMPANION ANGLE 50x50x5mm	1200

TABLE – 4

Construction Schedule 4 inch W.G as per SMACNA

MAX.DUCT DIMENSION	U.S. GAGE	LONGITUDINAL CONNECTION	INTERMEDIATE REINFORCEMENT	TRANSVERSE CONNECTION	SPACING
0-650	24	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
655-750	22	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
755-900	20	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
905-1000	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	DM-35	1220
1050-1500	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	COMPANION ANGLE 50x50x5mm	1200
1550-2100	16	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	COMPANION ANGLE 50x50x5mm	1200
2150-2400	16	PITTSBURGH (LOCK SEAM)	COMPANION ANGLE 50x50x5mm @600 max. c-c	COMPANION ANGLE 50x50x5mm	1200

TABLE – 6

Construction Schedule 6 inch W.G as per SMACNA

MAX.DUCT DIMENSION	U.S. GAGE	LONGITUDINAL CONNECTION	INTERMEDIATE REINFORCEMENT	TRANSVERSE CONNECTION	SPACING
0-500	24	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
555-650	22	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
655-750	20	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
755-900	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	DM-35	1220
905-1200	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	COMPANION ANGLE 50x50x5mm	1200
1250-1500	16	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	COMPANION ANGLE 50x50x5mm	1200
1550-2100	16	PITTSBURGH (LOCK SEAM)	COMPANION ANGLE 50x50x5mm @600 max. c-c	COMPANION ANGLE 50x50x5mm	1200

DUCTWORK CONSTRUCTION SCHEDULE

TABLE – 10

Construction Schedule 10 inch W.G as per SMACNA

MAX.DUCT DIMENSION	U.S. GAGE	LONGITUDINAL CONNECTION	INTERMEDIATE REINFORCEMENT	TRANSVERSE CONNECTION	SPACING
0-300	24	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
305-550	20	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	TDC	1120
555-700	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	DM-35	1220
705-1000	18	PITTSBURGH (LOCK SEAM)	NOT REQUIRED	COMPANION ANGLE 50x50x5mm	1200
1050-1500	18	PITTSBURGH (LOCK SEAM)	COMPANION ANGLE 50x50x5mm @600 max. c-c	COMPANION ANGLE 50x50x5mm	1200
1550-2100	16	PITTSBURGH (LOCK SEAM)	COMPANION ANGLE 60x60x6mm @600 max. c-c, with Tie Rod	COMPANION ANGLE 60x60x6mm	1200

APPENDIX A

Galvanized Sheet Thickness Tolerances

Gage	Thickness in Inches			Weight				Thickness in Millimeters		
	Min.	Max.	Nom.	Min lb/sf	Nom. lb/sf	Max. lb/sf	Nom. kg/m2	Min.	Max.	Nom.
33	.0060	.0120	.0090	.2409	.376	.486		.1524	.3048	.2286
32	.0104	.0164	.0134	.4204	.563	.665		.2642	.4166	.3404
31	.0112	.0172	.0142	.4531	.594	.698		.2845	.4369	.3607
30	.0127	.0187	.0157	.5143	.656	.759	3.20	.3188	.4783	.3988
29	.0142	.020	.0172	.5755	.719	.820		.3569	.5169	.4369
28	.0157	.0217	.0187	.6367	.781	.881	3.81	.3950	.5550	.4750
27	.0172	.0232	.0202	.6979	.844	.943		.4331	.5931	.5131
26	.0187	.0247	.0217	.7591	.906	1.004	4.42	.4712	.6312	.5512
25	.0217	.0287	.0247	.8407		1.167		.5274	.7274	.6274
24	.0236	.0316	.0276	.9590	1.156	1.285	5.64	.6010	.8010	.7010
23	.0266	.0346	.0306	1.0814		1.408		.6772	.8772	.7772
22	.0296	.0376	.0336	1.2038	1.406	1.530	6.86	.7534	.9534	.8534
21	.0326	.0406	.0336	1.3263		1.653		.8296	1.0296	.9296
20	.0356	.0436	.0396	1.4486	1.656	1.775	8.08	.906	1.106	1.006
19	.0406	.0506	.0456	1.6526		2.061		1.028	1.288	1.158
18	.0466	.0566	.0516	1.8974	2.156	2.305	10.52	1.181	1.441	1.311
17	.0525	.0625	.0575	2.1381		2.546		1.331	1.591	1.461
16	.0575	.0695	.0635	2.342	2.656	2.832	12.96	1.463	1.763	1.613
15	.0650	.0770	.0710	2.6481		3.138		1.653	1.953	1.803
14	.0705	.0865	.0785	2.8725	3.281	3.525	16.01	1.784	2.204	1.994
13	.0854	.1014	.0934	3.4804		4.133		2.162	2.5823	2.372
12	.0994	.1174	.1084	4.0516	4.531	4.786	22.11	2.523	2.983	2.753
11	.1143	.1323	.1233	4.6505		5.394		2.902	3.362	3.132
10	.1292	.1472	.1382	5.2675	5.781	6.002	28.21	3.280	3.740	3.510
9	.1442	.1622	.1532	5.8795		6.614		3.661	4.121	3.891
8	.1591	.1771	.1681	6.4874	6.875	7.222		4.040	4.500	4.270

NOTES:

- Based on ASTM A924/924M-94, Standard Specification for General Requirements for Sheet Steel, Metallic Coated by the Hot-Dip Process (formerly ASTMA525); and ASTMA653/A653M-94, Standard Specification for Sheet Steel, Zinc-Coat (Galvanized) or Zinc-Iron Alloy Coated (Galvanized) by the Hot-Dip Process.
- Tolerances are valid for 48 in. and 60 in. wide coil and cut length stock - other dimensions apply to other sheet widths and to strip.
- The lock forming grade of steel will conform to ASTM A653 (formerly ASTM A527).
- The steel producing industry recommends that steel be ordered by decimal thickness only. Thickness and zinc coating class can be stenciled on the sheet. The gage designation is retained for residual familiarity reference only.
- Minimum weight in this table is based on the following computation:
Minimum sheet thickness minus 0.001 in. of G60 coating times 40.8 lb. per sf. per in. plus 0.0369 lb./sf of zinc. G90 stock would be comparably calculated from:
 $(t - .00153 \text{ in.}) 40.8 \div 0.05564 = \text{minimum weight.}$
However, scale weight may run 2% (or more) greater than theoretical weight. Actual weight may be near 40.82 lb. per sf per in.
- G60 coating, per ASTM A653 and ASTM A90, has 0.60 oz/sf (triple spot test) total for two sides. 0.59 oz/sf of zinc equals 0.001 in. 1 oz is 0.0017 in. and is 305.15 g/m².
G90 coating is 0.90 oz/sf (triple spot test), or 0.00153 in. Magnetic gage measurement of zinc coating may have 15% error.
- ASTM D2092, Practice for Preparation of Zinc-Coated Galvanized Steel Surfaces for Paint, includes mill phosphatizing.
- ASTM A755 is the Specification for Sheet Steel, Metallic Coated by the Hot-Dip Process and Prepainted by the Coating Process for Exterior Building Products. Other information is available from the National Coil Coaters Association, Philadelphia, PA.
- Much chemical and atmospheric corrosion information is available from ASM International in Metals Park, Ohio and from NACE International in Houston, TX.
A principle international standard is ISO 3575, Continuous Hot-Dip Process, Zinc-Coated Carbon Steel Sheet of Commercial, Lock Forming and Drawing Qualities.



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