

SUPPLIER: M/s. PR PHARMA ENGINEERS PVT LTD., HYDERABAD.

EQUIPMENT: HVAC DUCT

STANDARD DUCT FABRICATION PROCEDURE



PHARMA ENGINEERS®
people in strength

STANDARD DUCT FABRICATION PROCEDURE

M/s .PR PHARMA ENGINEERS PVT.LTD

PLOT NO. 113/A/1, LANE 8, PHASE II,
IDA CHERLAPALLI, HYDERABAD- 500051.

Tel No.91-40 27261113, 27261114

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1. OBJECTIVE

The objective of this document is to provide guidelines and steps for duct fabrication.

2. SCOPE

The scope of this procedure is limited to the fabrication of below

- A). Main duct fabrication
- b). Branch and dropper duct fabrication

3. REFERENCE DUCT CONSTRUCTION STANDARDS

1. SMACNA standard 2012

Duct Dimension	Duct length mm	GI Sheet thickness	Reinforcement angle size	Duct length mm	GI Sheet thickness	Reinforcement angle size
0 to 450mm	1200	26G	25x25x3	2400	24G	25x25x3
450 to 750mm	1200	24G	25x25x3	2400	20G	40x40x3
750 to 1200mm	1200	22G	40x40x3	2400	16G	50x50x5
1200 to 1500mm	1200	18G	50x50x3	Not designed		
1500 to 2250mm	1200	18G	50x50x5	Not designed		

2. IS 655:2006

Duct Dimension	Duct length mm	GI Sheet thickness	Reinforcement angle size mm	Duct length mm	GI Sheet thickness	Reinforcement angle size mm
0 to 450mm	1200	26G	25x25x3	2400	24G	25x25x3
450 to 750mm	1200	24G	25x25x3	2400	22G	25x25x3
750 to 1500mm	1200	22G	40x40x3	2400	20G	40x40x3
1500 to 2250mm	1200	20G	40x40x3	Not designed		

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3. DW/144 Standard

Duct Dimension	Duct length mm	GI Sheet thickness	Reinforcement angle size
0 to 400mm	1200	24G	25x25x3
400 to 1000mm	1200	22G	25x25x3
1000 to 2500mm	1200	20G	40x40x3

4. Recommendation by PR Pharma engineers Pvt. Ltd.

Duct Dimension	Duct length mm	GI Sheet thickness	Reinforcement angle size mm	Duct length mm	GI Sheet thickness	Reinforcement angle size mm
0 to 750mm	1200	24G	25x25x3	2400	24G	25x25x3
750 to 1500mm	1200	22G	40x40x3	2400	22G	40x40x3
1500 to 2250mm	1200	20G	40x40x3	Not designed		

4. REFERENCE DUCT LEAKAGE CLASSES (SMACNA:2012)

Duct Pressure Class	1", 2" WG.	3" WG	4", 6" WG
Seal Class	C	B	A
Sealing Requirement	All Transverse Joints	All Transverse & Longitudinal Seams	All Transverse Joints, Longitudinal Seams & Wall Penetrations
Leakage Class :			
Rectangular Duct	Class 16	Class 8	Class 4
Round Duct	Class 8	Class 4	Class 2

Leakage Factor "Lf" - CFM/ 100 Sq. ft of Duct

Pressure Inside the Duct In. wg	Leakage Class (C _L)---- CFM/ 100 Sq. ft of Duct				Unsealed
	Class 2	Class 4	Class 8	Class 16	Class 48
1.0	2.0	4.0	8.0	16.0	48.0
2.0	3.1	6.3	12.6	25.1	75.3
3.0	4.1	8.2	16.3	32.7	98.0
4.0	4.9	9.8	-	-	-
5.0	5.7	11.4	-	-	-
6.0	6.4	12.8	-	-	-

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5. RECOMMENDED STANDARD DUCT SIZES

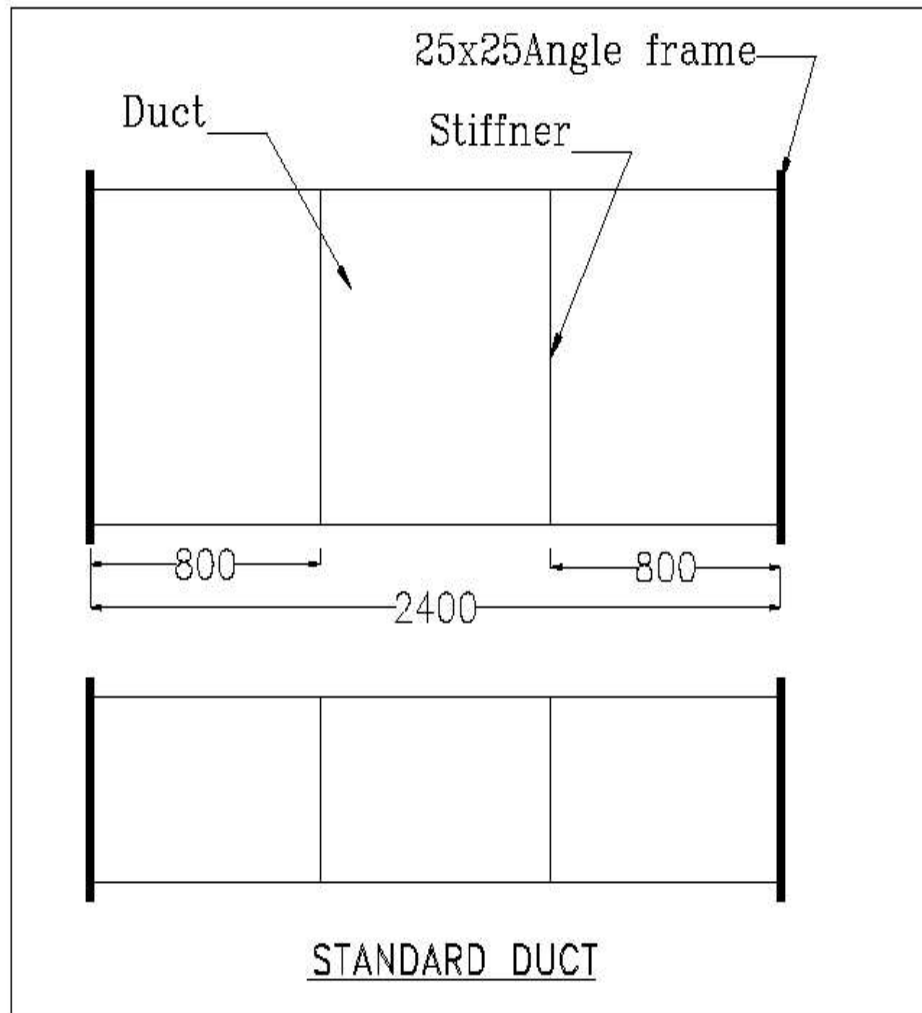
STANDARD STRAIGHT DUCT SIZES----- PR PHARMA ENGINEERS PVT. LTD.							
S.NO	Code	Gauge	Recommended Angle	Width (mm)	Height (mm)	Length (mm)	Recommended Airflow (CFM)
1	A	24	25X3	375	275	2400	1000
2	B	24	25X3	550	325	2400	2000
3	C	24	25X3	550	425	2400	3000
4	D	24	25X3	550	525	2400	4000
5	E	24	25X3	625	550	2400	5000
6	F	24	25X3	700	550	1220	6000
7	G	22	30X3	800	550	1220	7000
8	H	22	30X3	900	550	1220	8000
9	I	22	30X3	1000	550	1220	9000
10	J	22	30X3	1075	550	1220	10000
11	K	22	30X3	1175	550	1220	11000
12	L	22	30X3	1250	550	1220	12000
13	M	22	30X3	1350	550	1220	13000
14	N	22	30X3	1425	550	1220	14000
15	O	20	40X3	1525	550	1220	15000
16	P	20	40X3	1600	550	1220	16000
17	Q	20	40X3	1700	550	1220	17000
18	R	20	40X3	1800	550	1220	18000
STANDARD BRANCH DUCT SIZES							
19	S	24	25X3	550	225	1220	1000
20	T	24	25X3	350	225	1220	500
STANDARD DROPPER SIZES							
21	U	24	25X3	295	295	1220	1000

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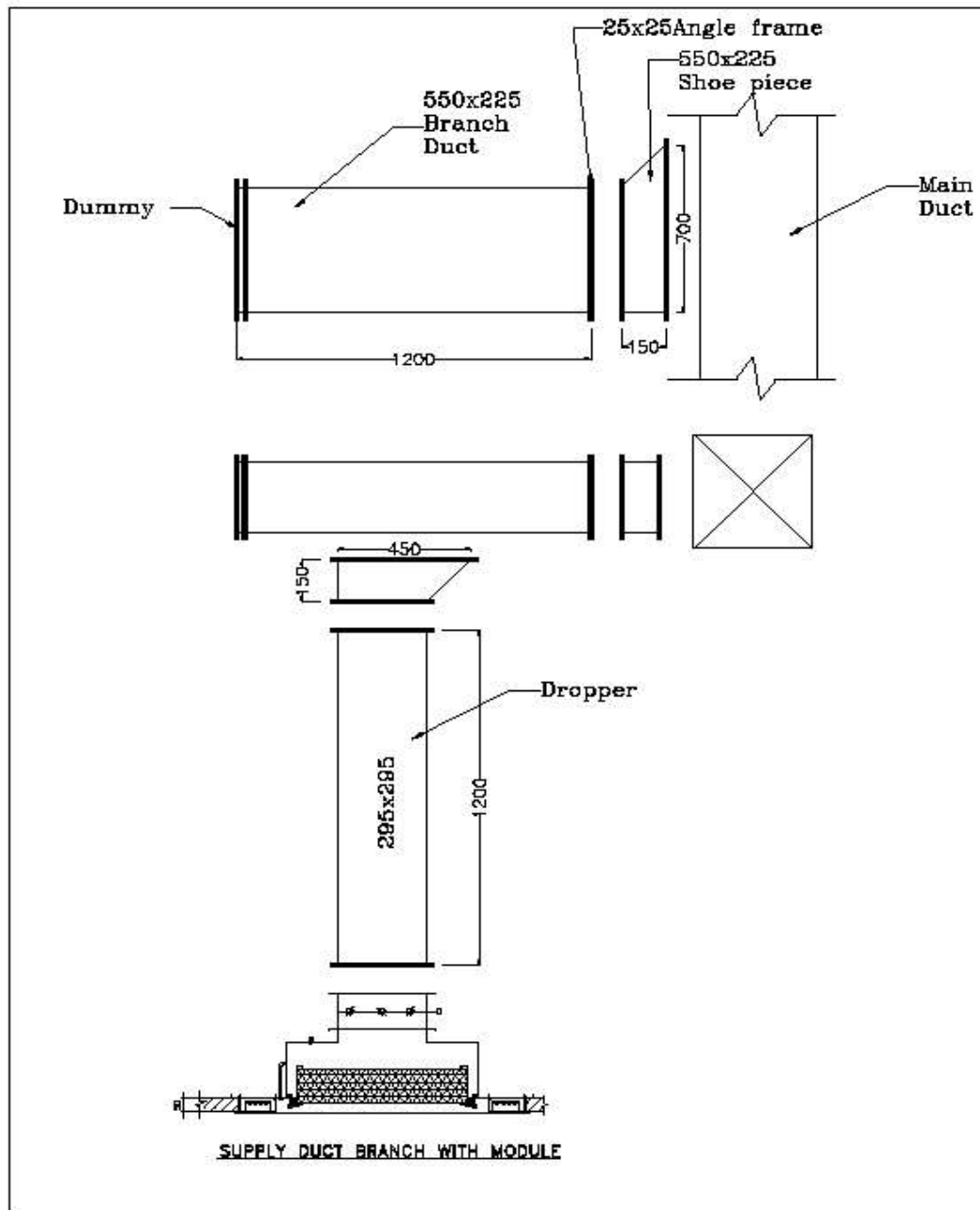
6. STANDARD DUCT DRAWINGS



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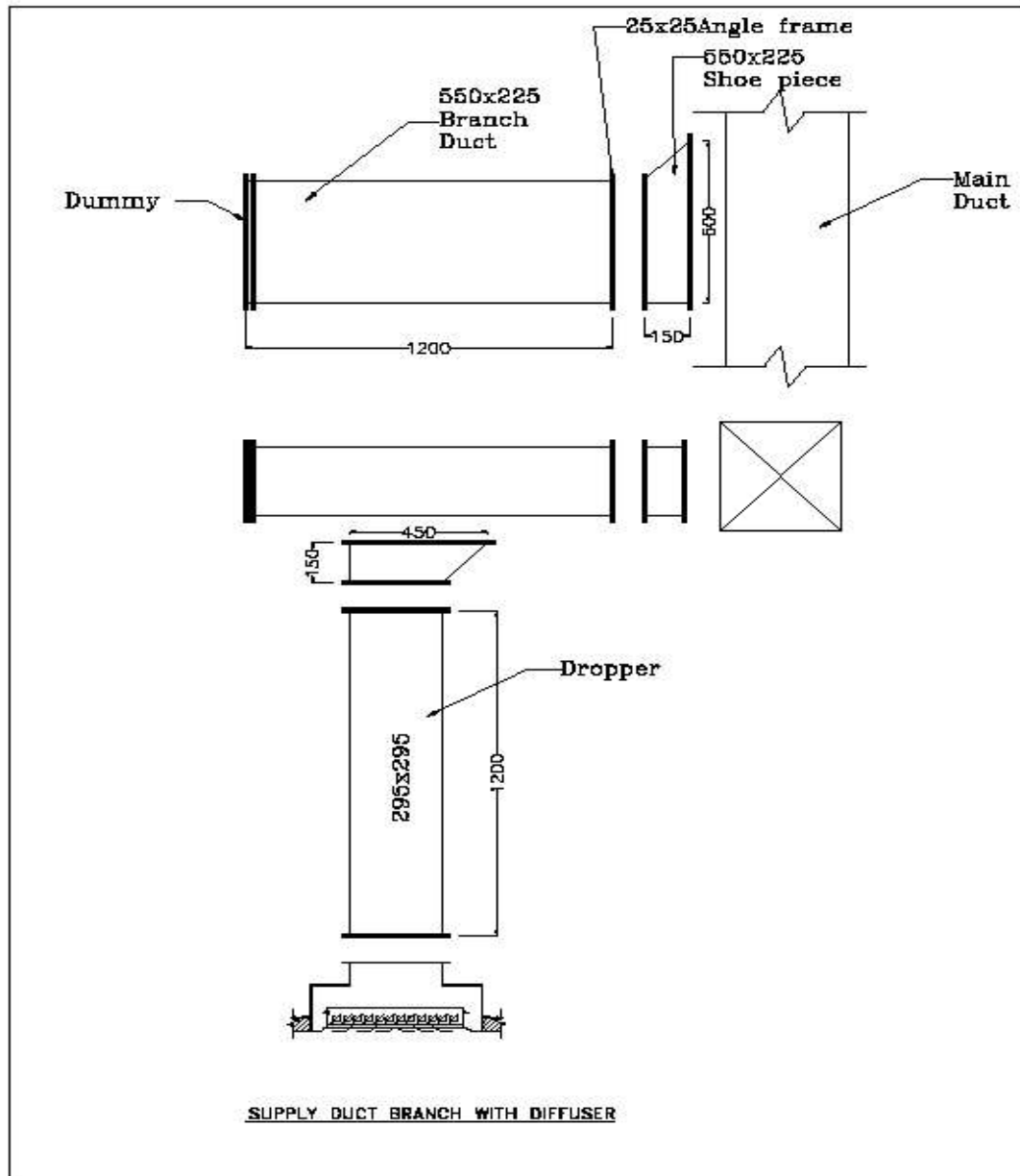
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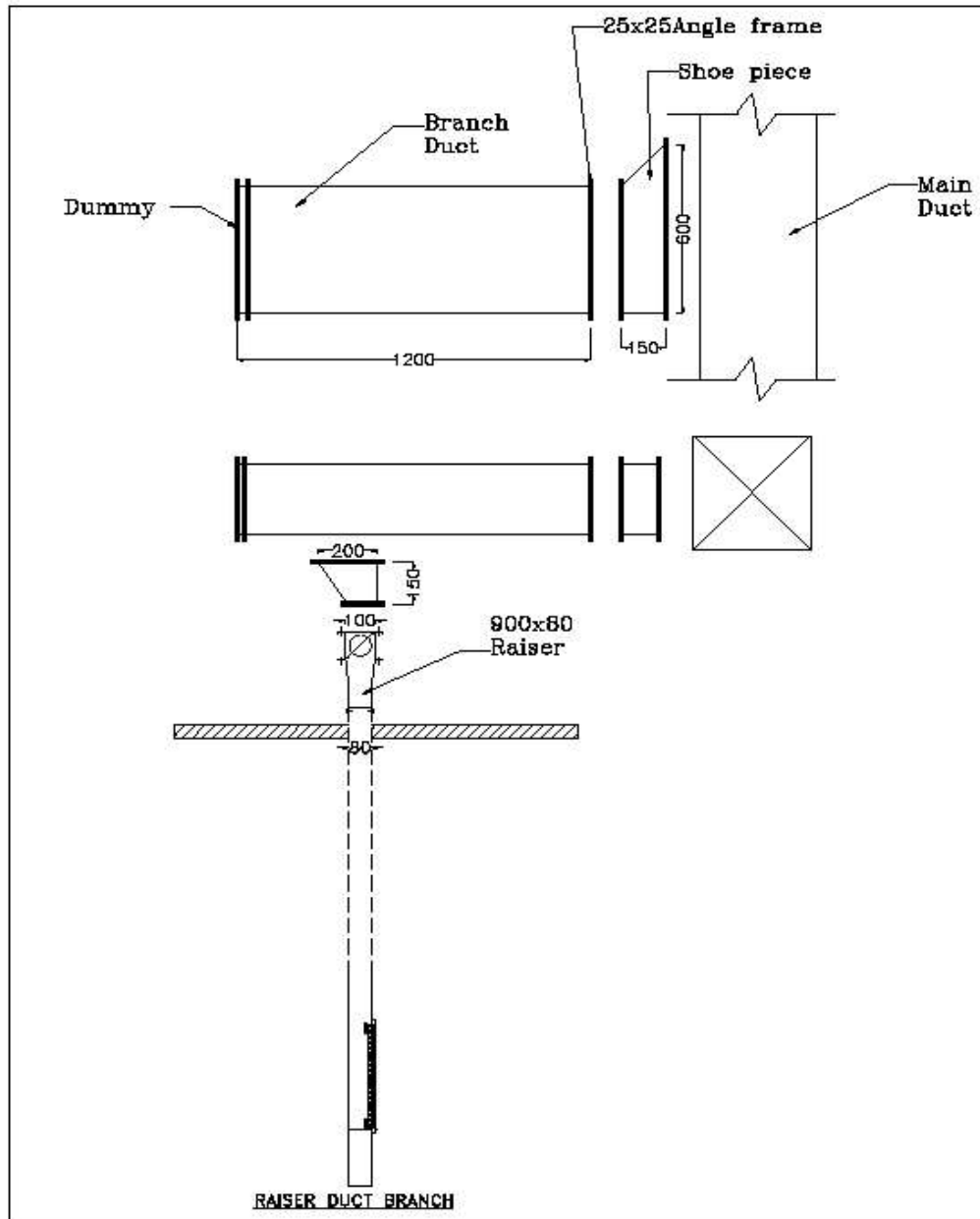
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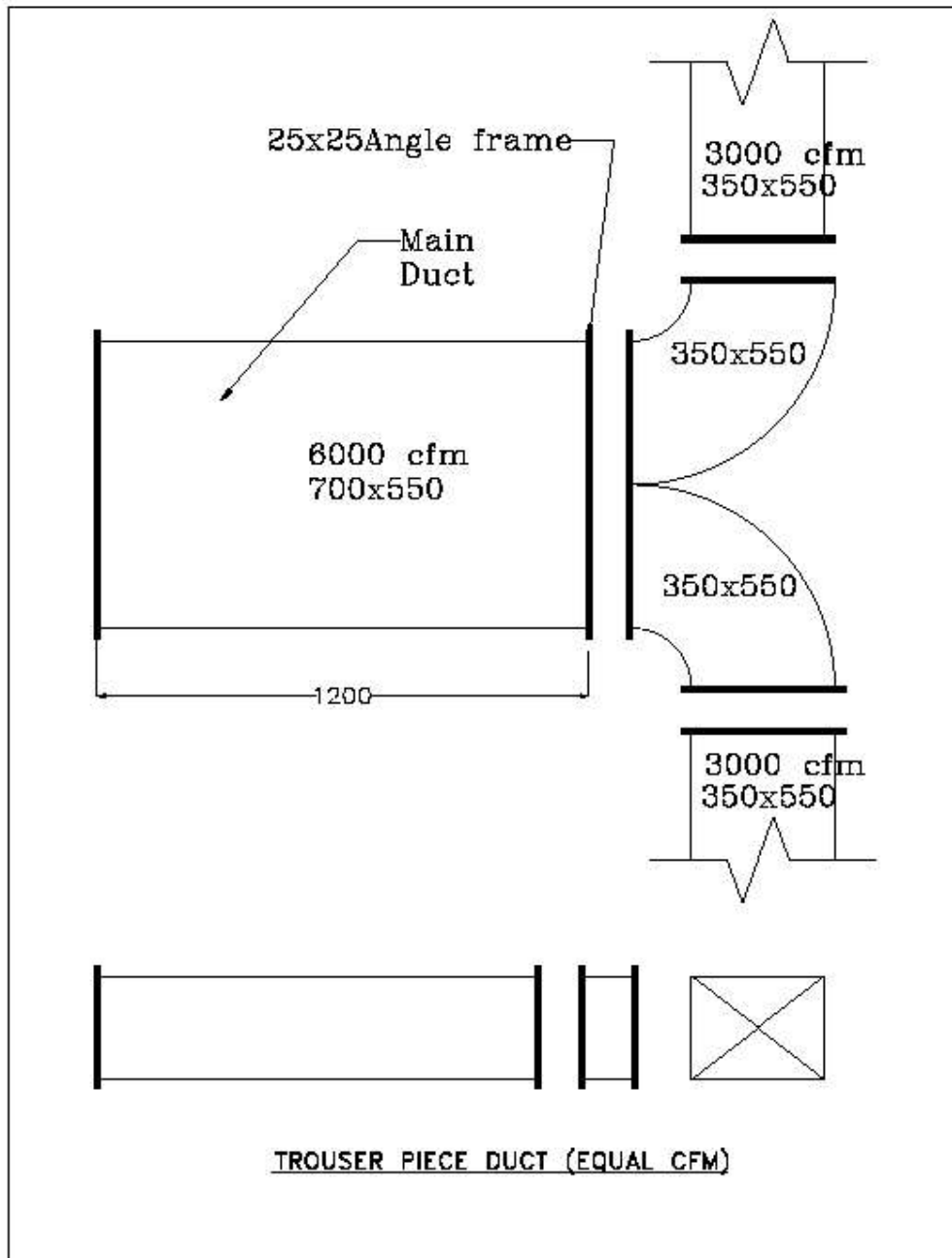
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