



SPIRAL PIPE & FITTINGS CONSTRUCTION STANDARDS

SUBMITTAL DATA HAMLIN DOUBLE WALL PIPE & FITTINGS SPIRAL PIPE AND FITTING GAGES FOR POSITIVE PRESSURES

MAXIMUM+10"W.G. OUTERWALL			INNERWALL		
SIZE	PIPE GA.	FITTING GA.	SIZE	PIPE GA.	FITTING GA.
3"- 14"	28	26	3"- 14"	28	26
15"- 18"	26	26	15"- 18"	26	26
19"- 24"	26	24	19"- 24"	26	24
25"- 42"	24	22	25"- 42"	24	22
43"- 60"	22	20	43"- 60"	22	20
61"- 66"	22	18	61"- 66"	22	18
67"- 96"	20	18	67"- 96"	20	18

PIPE AND FITTINGS are fabricated from G-90 galvanized steel sheet meeting ASTM A-924 standards (formerly A-653). The outer wall performs as the pressure shell and will be constructed and sealed according to pressure class.

SPIRAL PIPE is roll formed, continuous interlocked pipe which combines the economics of light metal and a spiral lockseam construction that assures maximum strength and rigidity. The lockseam combines four plies of metal to form a continuous interlocking rib on the outside which permits the fabrication of long lengths of pipe with a smooth interior. Inner wall can be solid or perforated with 3/32 diameter holes on 3/16 staggered centers. All pipe is available up to 20' lengths and is stocked in 10' lengths.

INSULATION - Fibrous glass blanket with UL 723 classification, flame spread rating of 25, smoke development rating of 50, R factor of 4.2, and K factor of 0.24.

FITTINGS - Construction features spot welds with all joints shop sealed. Optional construction features solid welds with weld area coated for protection when specified. Inner wall can be solid or perforated with 3/32 diameter holes on 3/16 staggered centers.

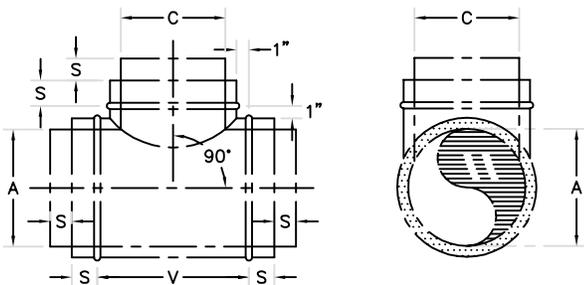
ELBOWS - are gored type with the number of gores in accordance with SMACNA 2005. All elbows have standard 1.5 x diameter center line radius.

ALL CONSTRUCTION STANDARDS IN ACCORDANCE WITH SMACNA AND ASHRAE STANDARDS.
HSM IS A MEMBER OF SPIRAL DUCT MANUFACTURERS ASSOCIATION (SPIDA).

JOB _____	
LOCATION _____	
ARCHITECT _____	JOB NO. _____
ENGINEER _____	REPRESENTATIVE _____
CONTRACTOR _____	DATE _____

FITTING STANDARDS DOUBLE WALL STRAIGHT TEES

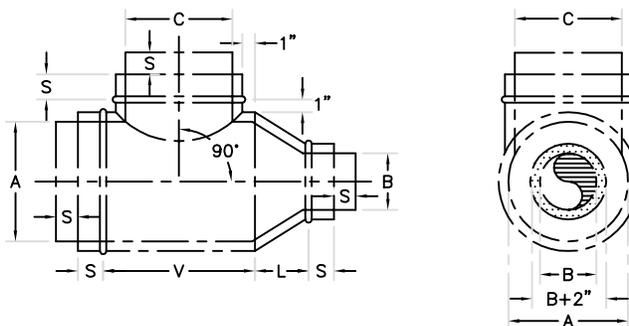
STRAIGHT TEE DWT1



DIMENSIONAL DATA:

- S=2"
- V=C+4"

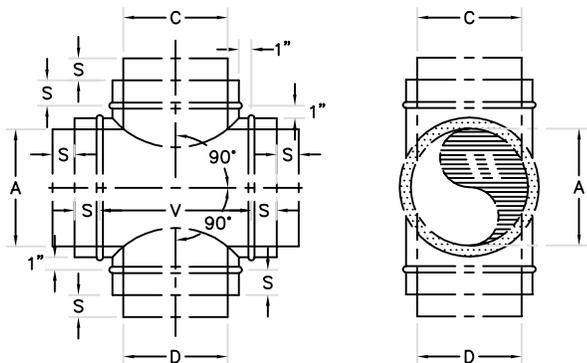
REDUCING TEE DWT1R



DIMENSIONAL DATA:

- S=2"
- V=C+4"
- L=A-B (4" MIN.-12" MAX.)

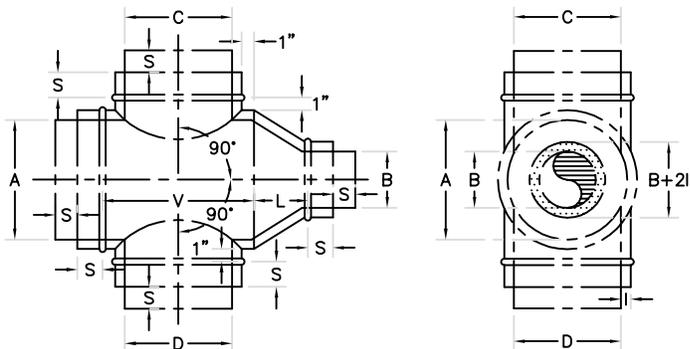
STRAIGHT CROSS DWT2



DIMENSIONAL DATA:

- S=2"
- V=LARGEST TAP+4"

REDUCING CROSS DWT2R

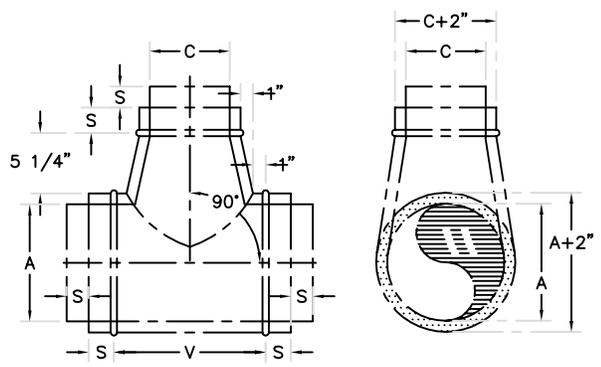


DIMENSIONAL DATA:

- S=2"
- V=LARGEST TAP+4"
- L=A-B (4" MIN.-12" MAX.)

FITTING STANDARDS DOUBLE WALL CONICAL TEES

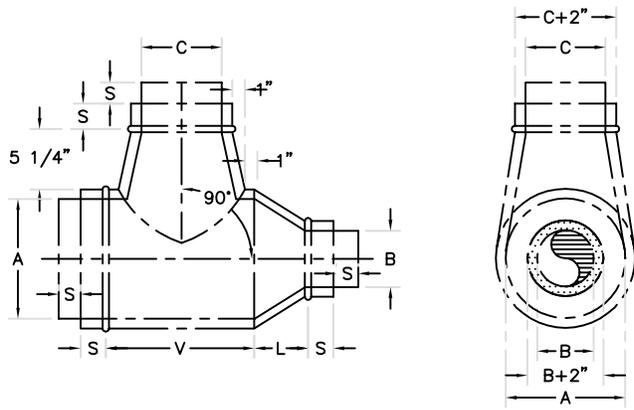
CONICAL TEE DWCT1



DIMENSIONAL DATA:

- S=2"
- V=C+6"

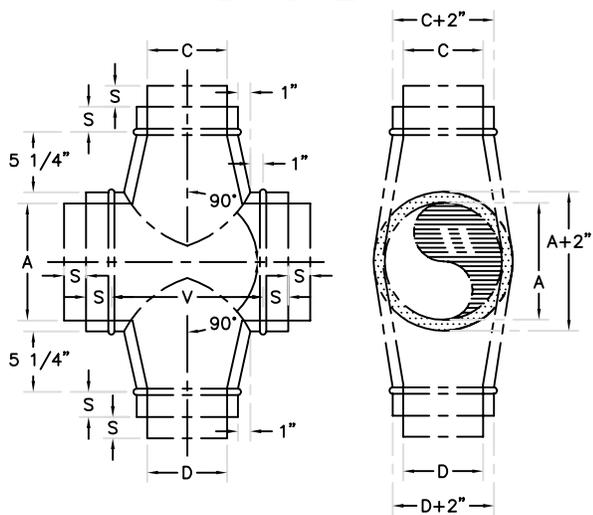
REDUCING CONICAL TEE DWCT1R



DIMENSIONAL DATA:

- S=2"
- V=C+6"
- L=A-B (4" MIN.-12" MAX.)

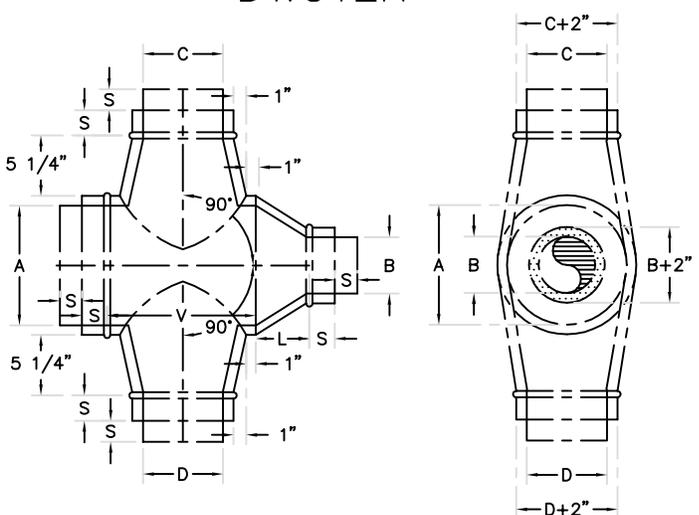
CONICAL CROSS DWCT2



DIMENSIONAL DATA:

- S=2"
- V=LARGEST TAP+6"

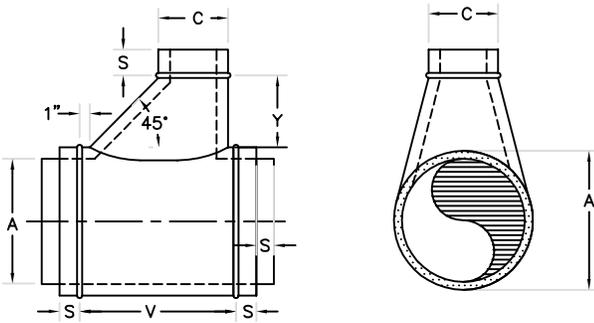
REDUCING CONICAL CROSS DWCT2R



DIMENSIONAL DATA:

- S=2"
- V=LARGEST TAP+6"
- L=A-B (4" MIN.-12" MAX.)

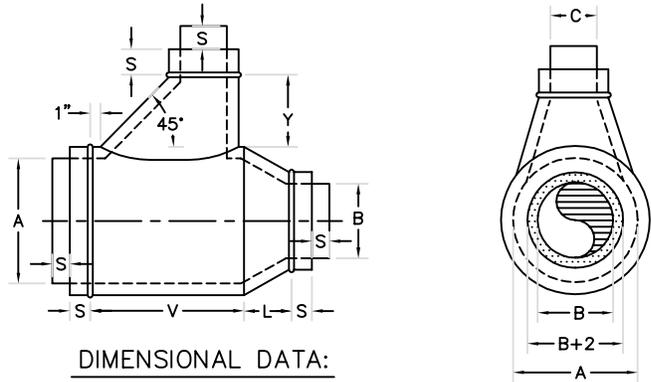
COMBINATION TEE DWCMBT1



DIMENSIONAL DATA:

- S=2"
- $V=(C+6)+2$
- C= 3-16 Y=6"
- C= 17-24 Y=9"
- C= 25-UP Y=12"

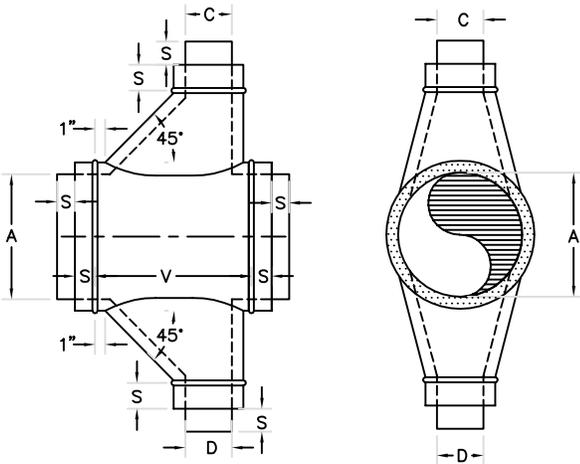
REDUCING COMBINATION TEE DWCMBT1R



DIMENSIONAL DATA:

- S=2"
- $V=(C+6)+2$
- $L=A-B$ (4" MIN.-12" MAX.)
- C= 3-16 Y=6"
- C= 17-24 Y=9"
- C= 25-UP Y=12"

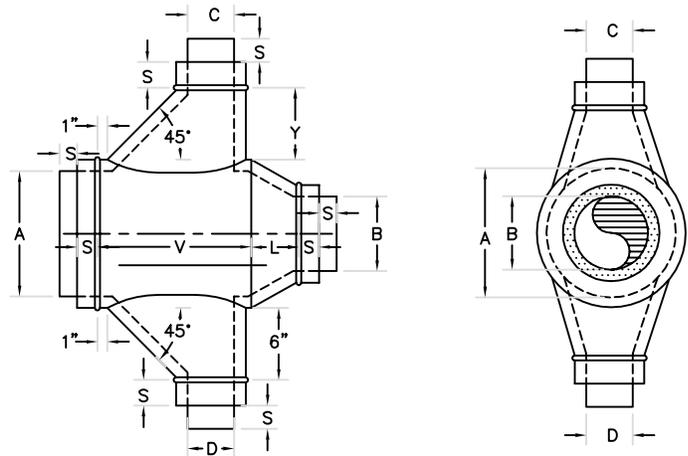
COMBINATION CROSS DWCMBT2



DIMENSIONAL DATA:

- S=2"
- $V=(\text{LARGEST TAP}+6)+2$
- C= 3-16 Y=6"
- C= 17-24 Y=9"
- C= 25-UP Y=12"

REDUCING COMBINATION CROSS DWCMBT2R

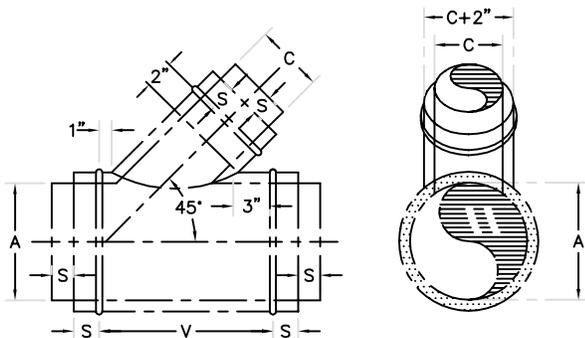


DIMENSIONAL DATA:

- S=2"
- $V=(\text{LARGEST TAP}+6)+2$
- $L=A-B$ (4" MIN.-12" MAX.)
- C= 3-16 Y=6"
- C= 17-24 Y=9"
- C= 25-UP Y=12"

FITTING STANDARDS DOUBLE WALL LATERALS

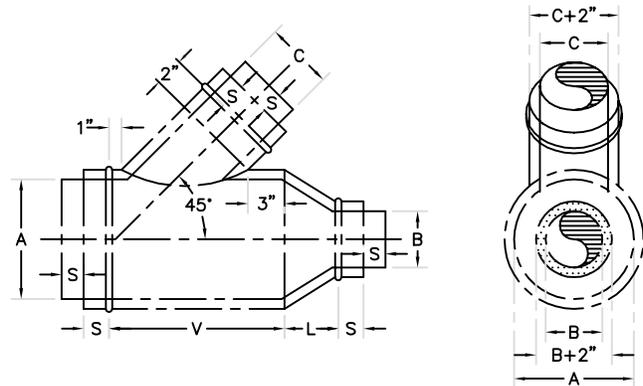
LATERAL DWL1



DIMENSIONAL DATA:

- S=2"
- $V=(1.414 \times (C+2''))+4''$

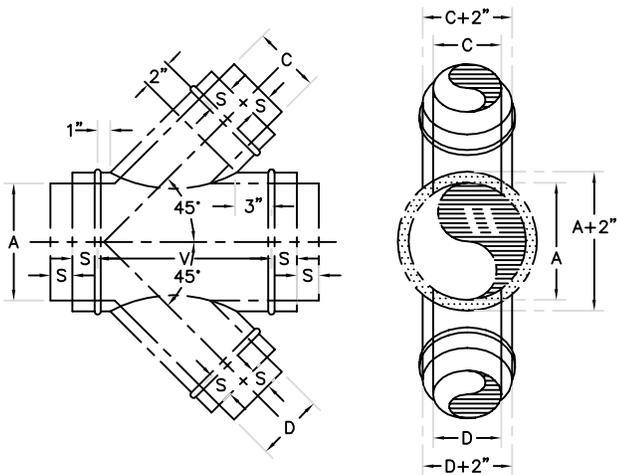
REDUCING LATERAL DWL1R



DIMENSIONAL DATA:

- S=2"
- $V=(1.414 \times (C+2''))+4''$
- L=A-B (4" MIN.-12" MAX.)

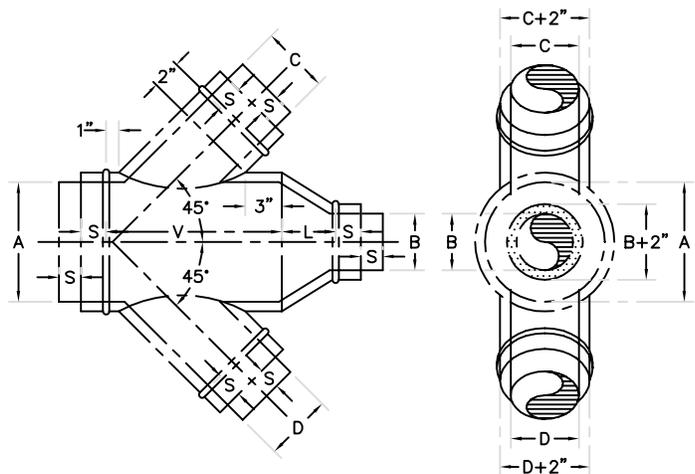
LATERAL CROSS DWL2



DIMENSIONAL DATA:

- S=2"
- $V=(1.414 \times (\text{LARGEST TAP}+2''))+4''$

REDUCING LATERAL CROSS DWL2R

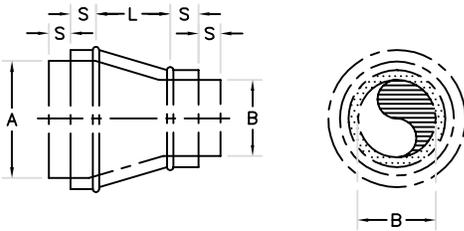


DIMENSIONAL DATA:

- S=2"
- $V=(1.414 \times (\text{LARGEST TAP}+2''))+4''$
- L=A-B (4" MIN.-12" MAX.)

FITTING STANDARDS
DOUBLE WALL FITTINGS
REDUCER

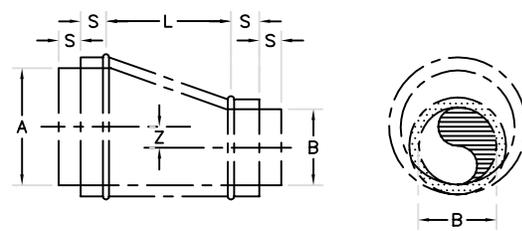
CONCENTRIC REDUCER
DWR1



DIMENSIONAL DATA:

- S=2"
- L=A-B (4" MIN.-12" MAX.)

ECCENTRIC REDUCER
DWER1



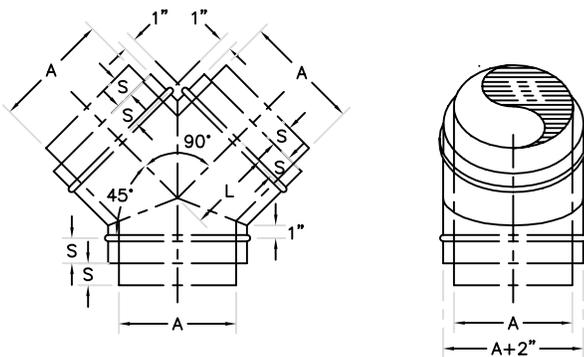
DIMENSIONAL DATA:

- S=2"
- L=A-B (4" MIN.-12" MAX.)
- Z=(A-B)/2



FITTING STANDARDS DOUBLE WALL FITTINGS Y-BRANCH

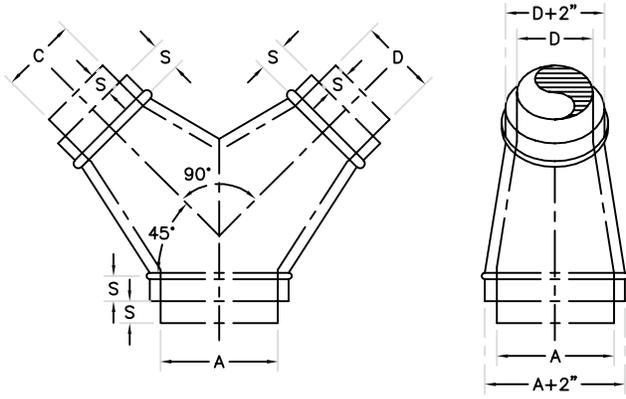
Y-BRANCH
DWY2



DIMENSIONAL DATA:

- $S=2"$
- $L=(A/2)+1"$

REDUCING Y-BRANCH
DWY2R

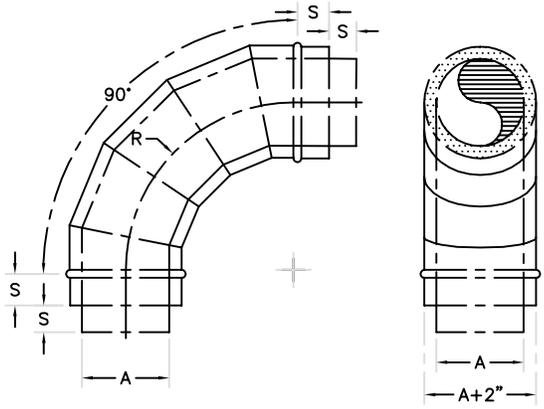


DIMENSIONAL DATA:

- $S=2"$

FITTING STANDARDS DOUBLE WALL ELBOWS

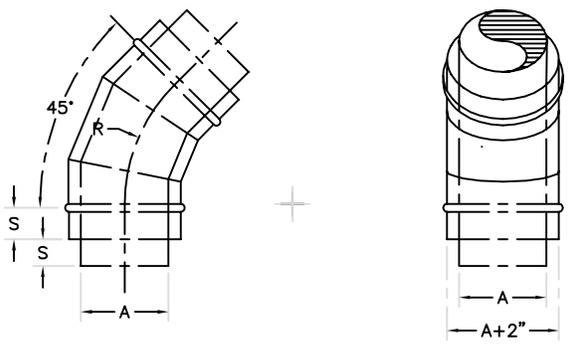
GORED ELBOW
DWE90



DIMENSIONAL DATA:

- S=2"
- R=1.5xA

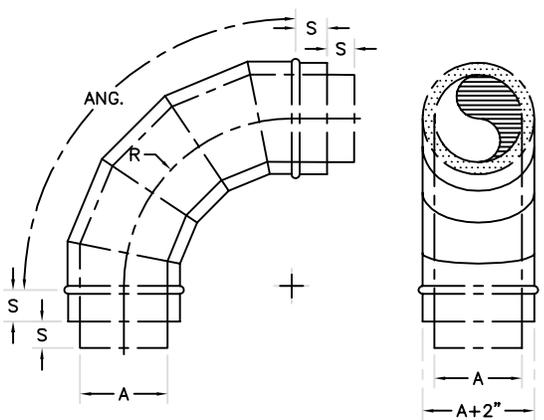
GORED ELBOW
DWE45



DIMENSIONAL DATA:

- S=2"
- R=1.5xA

GORED ELBOW
DWE___
DWE(ANGLE)

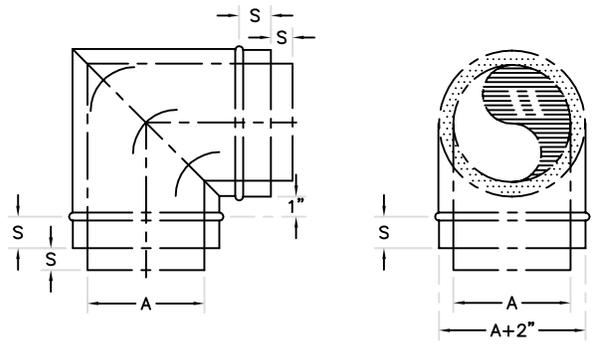


DIMENSIONAL DATA:

- S=2"
- R=1.5xA
- ANY ANGLE

ANGLE	
0-35°	- 2 PIECE
36-71°	- 3 PIECE
72-90°	- 5 PIECE

MITERED 90°
DWEV90



DIMENSIONAL DATA:

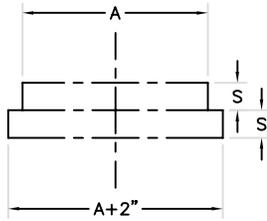
- S=2"
- 90° TYPICAL

DIAMETER	NUMBER OF VANES
3"-9"	2
10"-14"	3
15"-19"	4
20"-60"	5
OVER 60"	12" SPACING

FITTING STANDARDS

MISC. DOUBLE WALL FITTINGS

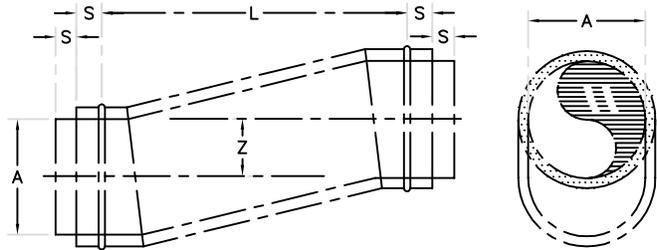
INSULATION END DSA



DIMENSIONAL DATA:

- S=2"

ROUND OFFSET DWSET



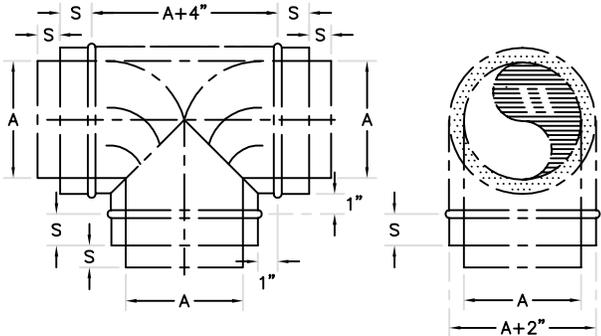
DIMENSIONAL DATA:

- S=2"
- MINIMUM L=2A+4"



FITTING STANDARDS
 DOUBLE WALL FITTINGS
 BULLHEAD TEE

BULLHEAD TEE
 DWBT

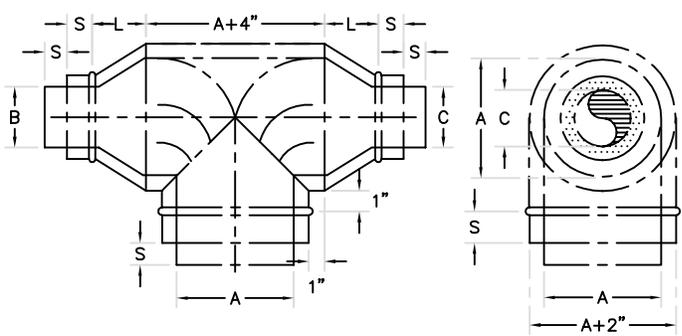


DIMENSIONAL DATA:

- S=2"
- WITH OR WITHOUT TURNING VANES

DIAMETER	NUMBER OF VANES
3"-5"	1
6"-9"	2
10"-14"	3
15"-19"	4
20"-60"	5
OVER 60"	12" SPACING

REDUCING BULLHEAD TEE
 DWBTR

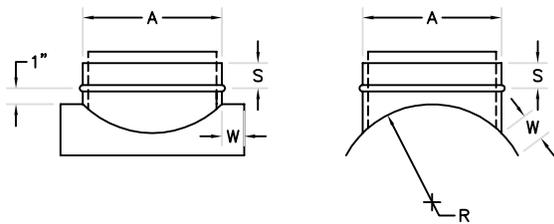


DIMENSIONAL DATA:

- S=2"
- WITH OR WITHOUT TURNING VANES

DIAMETER	NUMBER OF VANES
3"-5"	1
6"-9"	2
10"-14"	3
15"-19"	4
20"-60"	5
OVER 60"	12" SPACING

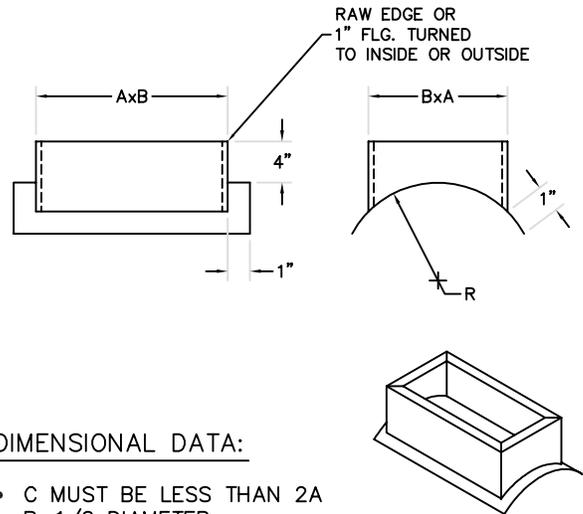
STRAIGHT SADDLE TAP
DWTST



DIMENSIONAL DATA:

- S=2"
- W=2"
- R=1/2 DIAMETER

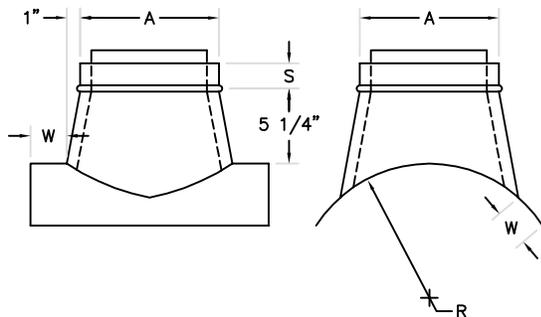
GRILL BOX TAP
DWGBST



DIMENSIONAL DATA:

- C MUST BE LESS THAN 2A
- R=1/2 DIAMETER

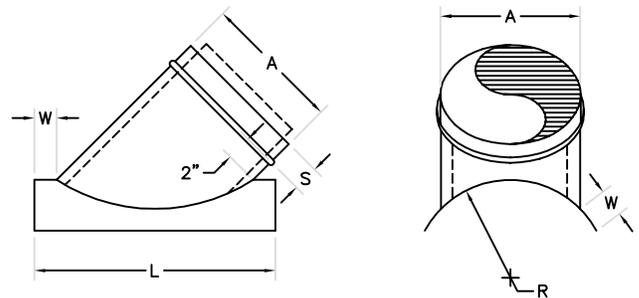
CONICAL SADDLE TAP
DWCST



DIMENSIONAL DATA:

- S=2"
- W=2"
- R=1/2 DIAMETER

CONICAL LATERAL SADDLE TAP
DWLST

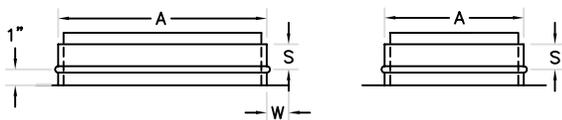


DIMENSIONAL DATA:

- S=2"
- L=(Bx1.414)+2W
- R=1/2 DIAMETER

FITTING STANDARDS MISC. TAPS OFF FLAT

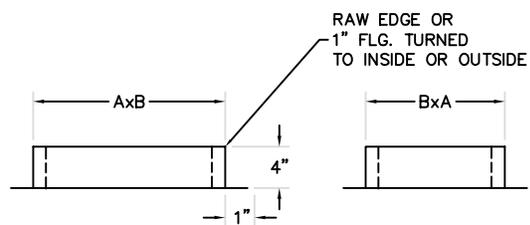
STRAIGHT SADDLE TAP ON FLAT DWTST ON FLAT



DIMENSIONAL DATA:

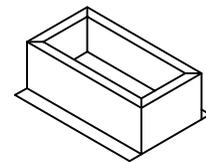
- S=2"
- W=2"

GRILL BOX TAP ON FLAT DWGBST ON FLAT

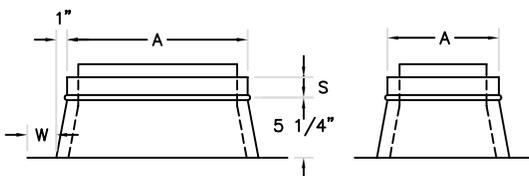


DIMENSIONAL DATA:

- C MUST BE LESS THAN 2A



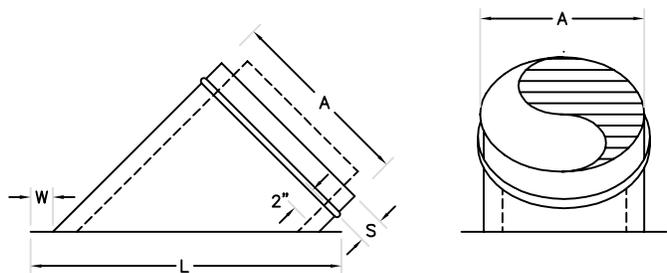
CONICAL SADDLE TAP ON FLAT DWCST ON FLAT



DIMENSIONAL DATA:

- S=2"
- W=2"

LATERAL SADDLE TAP ON FLAT DWLST ON FLAT

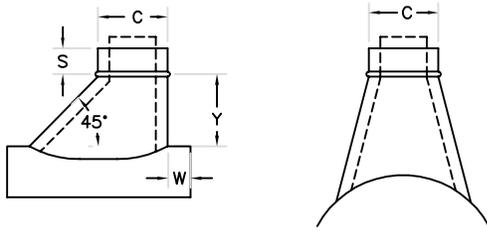


DIMENSIONAL DATA:

- S=2"
- $L=(A \times 1.414) + 2W$
- W=2"

FITTING STANDARDS COMBINATION TAPS

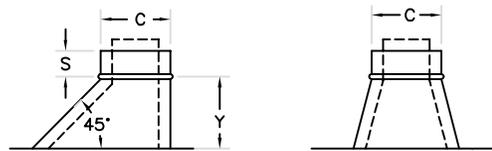
COMBINATION SADDLE DWCMBST



DIMENSIONAL DATA:

- S=2"
- $V=(C+6)+2$
- C= 3-16 Y=6"
- C= 17-24 Y=9"
- C= 25-UP Y=12"

COMBINATION SADDLE DWCMBST ON FLAT



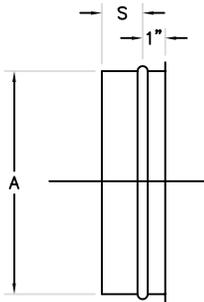
DIMENSIONAL DATA:

- S=2"
- $V=(C+6)+2$
- C= 3-16 Y=6"
- C= 17-24 Y=9"
- C= 25-UP Y=12"

FITTING STANDARDS

MISC. FITTINGS

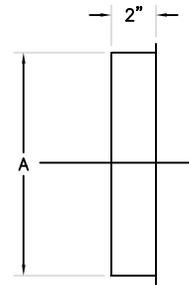
INSIDE PLUG
DWEF



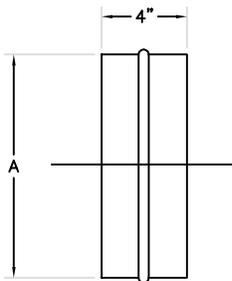
DIMENSIONAL DATA:

- S=2"

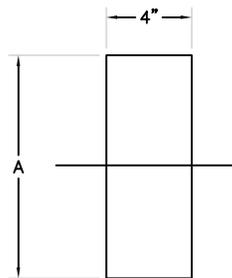
OUTSIDE CAP
DWEF



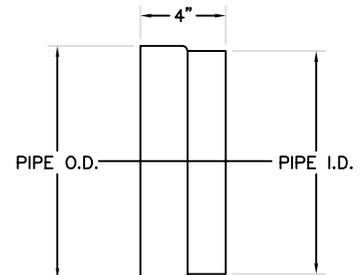
PIPE COUPLING
DWS1
(INSIDE COUPLING)



FITTING COUPLING
DWS2
(OUTSIDE COUPLING)



SPUN INSIDE-
OUTSIDE COUPLING
DWS3





ROUND DOUBLEWALL FITTINGS

LEGEND

DWBT - BULLHEAD TEE	DWR - REDUCER
DWT2 - CROSS	DWS - COUPLING
DWC - CONICAL	DWSET - OFFSET
DWCMB - COMBINATION	DWDSA - SPUN INSULATION END
DWE - ELBOW	DWSIO - SPUN INSIDE-OUTSIDE COUPLING
DWER - ECCENTRIC REDUCER	DWTST - SADDLE TAP
DWL - LATERAL	DWT - TEE
DWEC - END CAP	DWY - WYE BRANCH
DWEP - PLUG	

DIMENSIONING CODE

A	- Inside Diameter of Main Inlet
B	- Inside Diameter of Main Outlet, if Reducing
C,D,E,F	- Inside Diameters of Take Off Taps
P	- Angle Between Cross Tap Centerlines
R	- Radius
S	- Length of Male End of Fittings
Z	- Offset Height

ORDERING

Specify type of fittings and list the following dimensions:

ELBOWS	- A, (B, C)
TEES	- A, C, (B, D)
LATERALS	- A, C, (B, D)
CROSSES	- A, C, D, (B, E, F, P)
ACCESSORIES	- As Noted

The drawings shown are illustrative of the types fabricated.

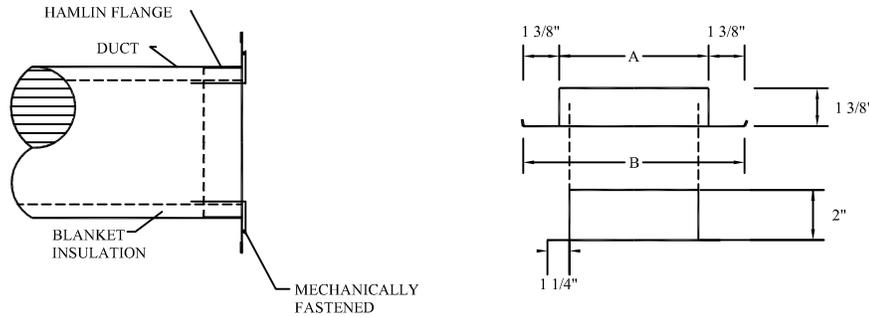
All fittings, unless noted, are fabricated as a male part on each end for slip-joint assembly with spiral pipe.

Van Stone angle ring, Solid welded flange, Accuflange, Hamlin flange, or Spiralmate flanges are available on special order.



DOUBLE WALL NEW HAMLIN FLANGE

DOUBLE WALL HAMLIN FLANGE DWHF



DIMENSIONAL DATA AS OD:

A-NOMINAL	A-ACTUAL	B	A-NOMINAL	A-ACTUAL	B
16"	15.88"	18.63"	40"	39.88"	42.63"
17"	16.88"	19.63"	42"	41.88"	44.63"
18"	17.88"	20.63"	44"	43.88"	46.63"
19"	18.88"	21.63"	46"	45.88"	48.63"
20"	19.88"	22.63"	48"	47.88"	50.63"
21"	20.88"	23.63"	50"	49.88"	52.63"
22"	21.88"	24.63"	52"	51.88"	54.63"
23"	22.88"	25.63"	54"	53.88"	56.63"
24"	23.88"	26.63"	56"	55.88"	58.63"
25"	24.8"	27.63"	58"	57.88"	60.63"
26"	25.88"	28.63"	60"	59.88"	62.63"
27"	26.88"	29.63"	62"	61.88"	64.63"
28"	27.88"	30.63"	64"	63.88"	66.63"
29"	28.88"	31.63"			
30"	29.88"	32.63"			
32"	31.88"	34.63"			
34"	33.88"	36.63"			
36"	35.88"	38.63"			
38"	37.88"	40.63"			

MATERIALS AVAILABLE: GALVANIZED, PAINT GRIP, STAINLESS STEEL AND ALUMINUM- 18 GA. TYP.