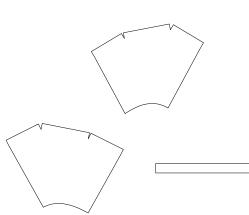
Pattern: 8 Rectangular/Round





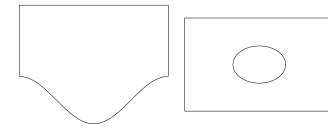
Dims	Options	Conn's
A=Width	Cross Break=2	C1=None
B=Depth	Length Break=1	C2=None
C=Diameter	Diameter Type=Nominal	
D=Length	Seam Position=Width	
E=Offset Width	Marker Type=Notch	
F=Offset Depth	Input=Length	
G=Extension	Offset Width=Left In	
H=Collar	Offset Depth=Bottom Up	
I=Corner Radius	Inlet=1	
J=Slope Angle	Outlet=2	
	Maximum Angle=180.000	Seams
	Fold Notch Depth=Full Allowance	S1=None
	Hide Internal Lines=No	
	Show Center Line=No	
	V Notch Rectangular Extension=No	
	Seam Cut Back=None	Damper: None
	Cut Back Allowance (%)=50.000	Damper Hone
	2 Parts 90 Degrees Seam=No	

Pattern: 16 Round/Fabrication

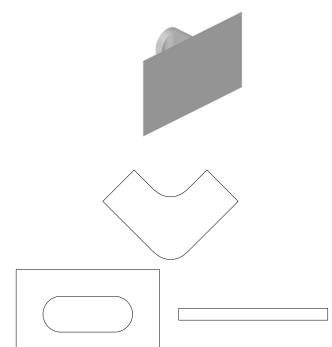


DIIIIS	Options	COIIII S
A=Branch Diameter	Branch Parts=1	C1=None
B=Length	Plate Parts=1	C2=None
C=Angle	Seam Position=0.000	
D=Plate Width	Hole Adjust=0.000	
E=Plate Depth	Diameter Type=Nominal	
F=Offset Width	Turnover=0.000	
G=Offset Depth	Item Pattern Length/Angle=Length	
H=Extension	Use Marker Notch (OM End)=Yes	
I=Bottom Width	Notch Hole Ends=No	
	Dynamic Hole Adjust=Auto	
		Seams
		S1=None
		S2=None

Damper: None



Round

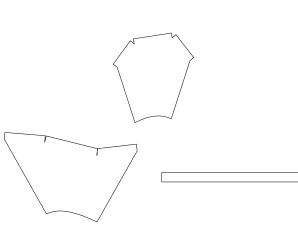


Dims	Options	Conn's
N=Branch Diameter	Branch Parts=1	C1=None
3=Length	Plate Parts=1	C2=None
E=Angle	Seam Position=0.000	
=Plate Width	Hole Adjust=0.000	
=Plate Depth	Diameter Type=Nominal	
=Offset Width	Turnover=0.000	
G=Offset Depth	Item Pattern Length/Angle=Length	
l=Collar	Use Marker Notch (OM End)=Yes	
=Bottom Width	Hide Internal Lines=No	
	Notch Hole Ends=No	
	Dynamic Hole Adjust=Auto	Seams
		S1=None
		S2=None

Damper: None

Pattern: 28 Rectangular/Round

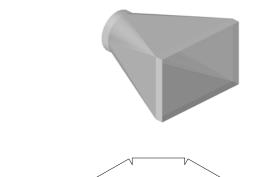




Dims	Options	Conn's
A=Width	Cross Break=2	C1=None
B=Depth	Length Break=1	C2=None
C=Diameter	Diameter Type=Nominal	
D=Length	Seam Position=Width	
E=Rectangular Angle	Marker Type=Notch	
F=Offset Width	Offset Width=Left In	
G=Offset Depth	Offset Depth=Bottom Up	
H=Extension	Inlet=1	
I=Collar	Outlet=2	
J=Round Angle	Fold Notch Depth=Full Allowance	
K=Corner Radius	V Notch Rectangular Extension=No	Seams
	Seam Cut Back=None	S1=None
	Cut Back Allowance (%)=50.000	
	2 Parts 90 Degrees Seam=No	

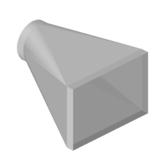
Damper: None

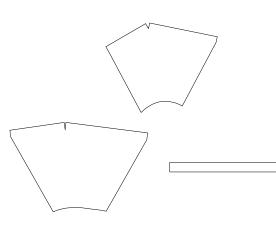
Rectangular/Round



Dims	Options	Conn's
A=Width	Cross Break=2	C1=None
B=Depth	Length Break=1	C2=None
C=Diameter	Diameter Type=Nominal	
D=Length	Seam Position=Width	
E=Extension	Marker Type=Notch	
F=Collar	Input=Length	
G=Corner Radius	Offset Width=Left In	
H=Slope Angle	Offset Depth=Bottom Up	
	Inlet=1	
	Outlet=2	
	Maximum Angle=180.000	Seams
	Fold Notch Depth=Full Allowance	S1=None
	V Notch Rectangular Extension=No	
	Seam Cut Back=None	
	Cut Back Allowance (%)=50.000	
	2 Parts 90 Degrees Seam=No	Dampor: Nono
	ŭ	Damper: None

Pattern: 34 Rectangular/Round/Fabrication



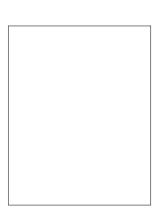


Dims	Options	Conn's
A=Width	Cross Break=2	C1=None
B=Depth	Length Break=1	C2=None
C=Diameter	Diameter Type=Nominal	
D=Length	Seam Position=Corner	
E=Offset Width	Marker Type=Notch	
F=Offset Depth	Input=Length	
G=Extension	Offset Width=Left In	
H=Collar	Offset Depth=Bottom Up	
I=Corner Radius	Inlet=1	
J=Slope Angle	Outlet=2	
	Maximum Angle=180.000	Seams
	Fold Notch Depth=Full Allowance	S1=None
	V Notch Rectangular Extension=No	
	Seam Cut Back=None	
	Cut Back Allowance (%)=50.000	
	2 Parts 90 Degrees Seam=No	Damper: None

4/18/2016 courtesy of software 3

Round

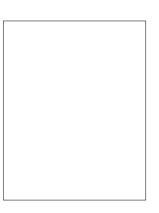




Dims	Options	Conn's
A=Diameter	Seam Position=0.000	C1=None
B=Length	Diameter Type=Nominal	C2=None
C=Left Extension	Duct Length=(inch)	
D=Right Extension	Area Adjust (%)=0.000	
	Allow Multiple Straights=Yes	
	STD Straight=No	
	Pipe Parts=1	
	First Break=0.000	
	Second Break=0.000	
	Third Break=0.000	
		Seams
		S1=None
	Third Break=0.000	

Pattern: 41
Round/Fabrication





Dims	Options	Conn's
A=Diameter	Seam Position=0.000	C1=None
B=Length	Diameter Type=Nominal	C2=None
C=Left Extension	Pipe Parts=1	
D=Right Extension	First Break=0.000	
	Second Break=0.000	
	Third Break=0.000	

Seams S1=None

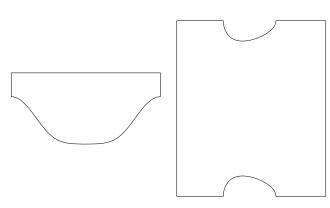
Damper: None None

Damper: None None

4/18/2016 courtesy of software 4

Round



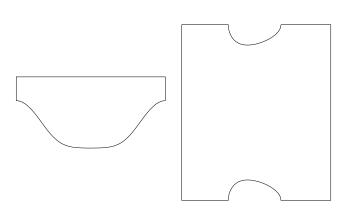


Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	
E=Branch Diameter #1	Third Break=0.000	
F=Branch Length #1	Pipe Diameter Type=Nominal	
G=Angle #1	Branch Diameter Type=Nominal	
H=Inset #1	Hole Adjust=0.000	
I=Extension #1	Branch Allowance To Pipe=0.000	
	Branch Seam Position=0.000	
	Throat Cut Back (Degrees)=0.000	Seams
	Plate Border (Circumference)=0.000	S1=None
	Plate Type=Rectangular	S2=None
	Cut Back Allowance (%)=0.000	
	Use Pipe Seam For Branches=No	
	Plate Border (Length)=Auto	Damper: None
	Inlet=1	None
	Outlet=2	None
	End Castle Width =0.000	None
	End Castle Angle=30.000	
	Branches=Fabricated	

Pattern: 43

Round

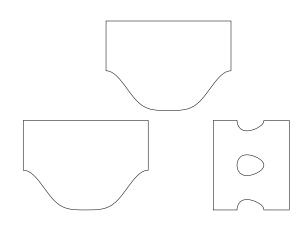




Options	Conn's
Pipe Parts=1	C1=None
Branch Parts=1	C2=None
First Break=0.000	C3=None
Second Break=0.000	
Third Break=0.000	
Pipe Diameter Type=Nominal	
Branch Diameter Type=Nominal	
Hole Adjust=0.000	
Branch Allowance To Pipe=0.000	
Branch Seam Position=0.000	
Throat Cut Back (Degrees)=0.000	Seams
Plate Border (Circumference)=0.000	S1=None
Plate Type=Rectangular	S2=None
Cut Back Allowance (%)=0.000	
Use Pipe Seam For Branches=No	
Plate Border (Length)=Auto	Damper: None
End Castle Width =0.000	None
End Castle Angle=30.000	None
	Branch Parts=1 First Break=0.000 Second Break=0.000 Third Break=0.000 Pipe Diameter Type=Nominal Branch Diameter Type=Nominal Hole Adjust=0.000 Branch Allowance To Pipe=0.000 Branch Seam Position=0.000 Throat Cut Back (Degrees)=0.000 Plate Border (Circumference)=0.000 Plate Type=Rectangular Cut Back Allowance (%)=0.000 Use Pipe Seam For Branches=No Plate Border (Length)=Auto End Castle Width =0.000

Round



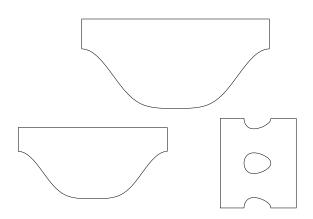


Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length C=Left Extension D=Right Extension E=Branch Diameter #1 F=Branch Length #1 G=Angle #1 H=Inset #1 I=Extension #1	Branch Parts=1 First Break=0.000 Second Break=0.000 Third Break=0.000 Pipe Diameter Type=Nominal Branch Diameter Type=Nominal Branch Diameter Type=Nominal Hole Adjust=0.000	C2=None C3=None C4=None
J=Branch Diameter #2 K=Branch Length #2 L=Angle #2 M=Inset #2 N=Extension #2	Branch Allowance To Pipe=0.000 Branch Seam Position=0.000 Throat Cut Back (Degrees)=0.000 Plate Border (Circumference)=0.000 Plate Type=Rectangular Cut Back Allowance (%)=0.000	Seams S1=None S2=None S3=None
	Use Pipe Seam For Branches=No Plate Border (Length)=Auto End Castle Width =0.000 End Castle Angle=30.000 Branches=Fabricated	Damper: None None None None

Pattern: 45

Round

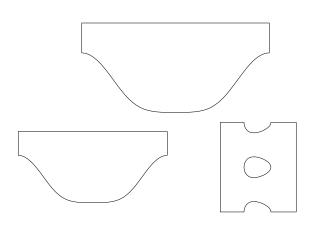




A=Pipe Diameter	Pipe Parts=1	··
		C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	C4=None
E=Branch Diameter #1	Third Break=0.000	
F=Branch Length #1	Pipe Diameter Type=Nominal	
G=Angle #1	Branch Diameter Type=Nominal	
H=Inset #1	Branch Diameter Type=Nominal	
I=Offset #1	Hole Adjust=0.000	
J=Extension #1	Branch Allowance To Pipe=0.000	
K=Branch Diameter #2	Branch Seam Position=0.000	Seams
L=Branch Length #2	Throat Cut Back (Degrees)=0.000	S1=None
M=Angle #2	Plate Border (Circumference)=0.000	S2=None
N=Inset #2	Plate Type=Rectangular	S3=None
O=Offset #2	Cut Back Allowance (%)=0.000	
P=Extension #2	Use Pipe Seam For Branches=No	Damper: None
	Plate Border (Length)=Auto	None
	End Castle Width =0.000	None
	End Castle Angle=30.000	None

Round

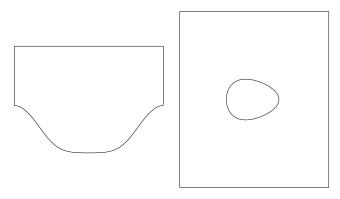




Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	C4=None
E=Branch Diameter #1	Third Break=0.000	
F=Branch Length #1	Pipe Diameter Type=Nominal	
G=Angle #1	Branch Diameter Type=Nominal	
H=Inset #1	Branch Diameter Type=Nominal	
I=Offset #1	Hole Adjust=0.000	
J=Extension #1	Branch Allowance To Pipe=0.000	
K=Branch Diameter #2	Branch Seam Position=0.000	Seams
L=Branch Length #2	Throat Cut Back (Degrees)=0.000	S1=None
M=Angle #2	Plate Border (Circumference)=0.000	S2=None
N=Inset #2	Plate Type=Rectangular	S3=None
O=Offset #2	Cut Back Allowance (%)=0.000	
P=Rotation #2	Use Pipe Seam For Branches=No	Damper: None
Q=Extension #2	Plate Border (Length)=Auto	None
	End Castle Width =0.000	None
	End Castle Angle=30.000	None

Pattern: 47 Round

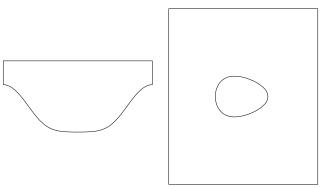




Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	
E=Branch Diameter #1	Third Break=0.000	
F=Branch Length #1	Pipe Diameter Type=Nominal	
G=Angle #1	Branch Diameter Type=Nominal	
H=Inset #1	Hole Adjust=0.000	
I=Extension #1	Branch Allowance To Pipe=0.000	
	Branch Seam Position=0.000	
	Throat Cut Back (Degrees)=0.000	Seams
	Plate Border (Circumference)=0.000	S1=None
	Plate Type=Rectangular	S2=None
	Cut Back Allowance (%)=0.000	
	Use Pipe Seam For Branches=No	
	Plate Border (Length)=Auto	Damper: None
	Inlet=1	None
	Outlet=2	None
	End Castle Width =0.000	None
	End Castle Angle=30.000	
	Branches=Fabricated	

Round

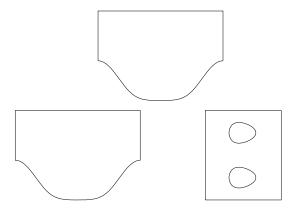




Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	
E=Branch Diameter #1	Third Break=0.000	
F=Branch Length #1	Pipe Diameter Type=Nominal	
G=Angle #1	Branch Diameter Type=Nominal	
H=Inset #1	Hole Adjust=0.000	
I=Offset #1	Branch Allowance To Pipe=0.000	
J=Extension #1	Branch Seam Position=0.000	
	Throat Cut Back (Degrees)=0.000	Seams
	Plate Border (Circumference)=0.000	S1=None
	Plate Type=Rectangular	S2=None
	Cut Back Allowance (%)=0.000	
	Use Pipe Seam For Branches=No	
	Plate Border (Length)=Auto	Damper: None
	End Castle Width =0.000	None
	End Castle Angle=30.000	None

Pattern: 49 Round



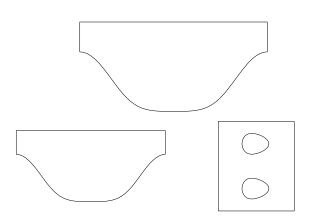


Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	C4=None
E=Branch Diameter #1	Third Break=0.000	
F=Branch Length #1	Pipe Diameter Type=Nominal	
G=Angle #1	Branch Diameter Type=Nominal	
H=Inset #1	Branch Diameter Type=Nominal	
I=Extension #1	Hole Adjust=0.000	
J=Branch Diameter #2	Branch Allowance To Pipe=0.000	
K=Branch Length #2	Branch Seam Position=0.000	Seams
L=Angle #2	Throat Cut Back (Degrees)=0.000	S1=None
M=Inset #2	Plate Border (Circumference)=0.000	S2=None
N=Extension #2	Plate Type=Rectangular	S3=None
	Cut Back Allowance (%)=0.000	
	Use Pipe Seam For Branches=No	Damper: None
	Plate Border (Length)=Auto	None
	End Castle Width =0.000	None
	End Castle Angle=30.000	None
	Branches=Fabricated	None

courtesy of Applied Software 4/18/2016

Round





Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	C4=None
E=Branch Diameter #1	Third Break=0.000	
F=Branch Length #1	Pipe Diameter Type=Nominal	
G=Angle #1	Branch Diameter Type=Nominal	
H=Inset #1	Branch Diameter Type=Nominal	
I=Offset #1	Hole Adjust=0.000	
J=Extension #1	Branch Allowance To Pipe=0.000	
K=Branch Diameter #2	Branch Seam Position=0.000	Seams
L=Branch Length #2	Throat Cut Back (Degrees)=0.000	S1=None
M=Angle #2	Plate Border (Circumference)=0.000	S2=None
N=Inset #2	Plate Type=Rectangular	S3=None
O=Offset #2	Cut Back Allowance (%)=0.000	
P=Extension #2	Use Pipe Seam For Branches=No	Damper: None
	Plate Border (Length)=Auto	None
	End Castle Width =0.000	None
	End Castle Angle=30.000	None

Pattern: 51 Round/Fabrication



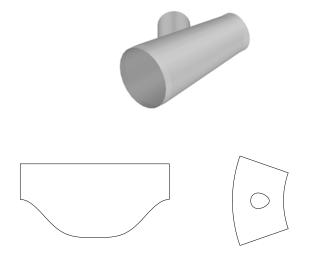


8:	2 ::	
Dims	Options	Conn's
A=Diameter In	Diameter Type BE=Nominal	C1=None
B=Diameter Out	Diameter Type SE=Nominal	C2=None
C=Length	Cross Break=1	
D=Left Extension	Length Break=1	
E=Right Extension	Seam For Weathering=No	
F=Angle	Input=Length	
	Length Includes Extensions=No	
	Auto Oversize=Normal	
	Graining Angle=90.000	
		Seams
		S1=None

Damper: None None

courtesy of Applied Software 4/18/2016

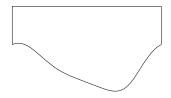
Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Branch Parts=1	C2=None
C=Pipe Length	First Break=0.000	C3=None
D=Left Extension	Second Break=0.000	
E=Right Extension	Third Break=0.000	
F=Branch Diameter #1	Seam Position=270.000	
G=Branch Length #1	Diameter Type BE=Nominal	
H=Angle #1	Diameter Type SE=Nominal	
=Inset #1	Branch Diameter Type=Nominal	
I=Extension #1	Hole Adjust=0.000	
	Branch Allowance To Pipe=0.000	Seams
	Branch Seam Position=0.000	S1=None
	Throat Cut Back (Degrees)=0.000	S2=None
	Cut Back Allowance (%)=0.000	
	End Castle Width =0.000	
	End Castle Angle=30.000	Damper: None
		None
		None

Pattern: 53 Round/Fabrication



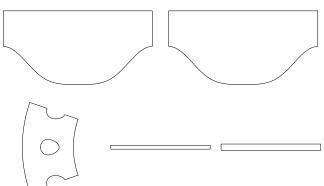




Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Branch Parts=1	C2=None
C=Pipe Length	First Break=0.000	C3=None
D=Left Extension	Second Break=0.000	
E=Right Extension	Third Break=0.000	
F=Branch Diameter #1	Seam Position=270.000	
G=Branch Length #1	Diameter Type BE=Nominal	
H=Angle #1	Diameter Type SE=Nominal	
I=Inset #1	Branch Diameter Type=Nominal	
J=Offset #1	Hole Adjust=0.000	
K=Extension #1	Branch Allowance To Pipe=0.000	Seams
	Branch Seam Position=0.000	S1=None
	Throat Cut Back (Degrees)=0.000	S2=None
	Cut Back Allowance (%)=0.000	
	End Castle Width =0.000	
	End Castle Angle=30.000	Damper: None
		None
		None

Round/Fabrication





Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Branch Parts=1	C2=None
C=Pipe Length	First Break=0.000	C3=None
D=Left Extension	Second Break=0.000	C4=None
E=Right Extension	Third Break=0.000	
F=Branch Diameter #1	Seam Position=270.000	
G=Branch Length #1	Diameter Type BE=Nominal	
H=Angle #1	Diameter Type SE=Nominal	
I=Inset #1	Branch Diameter Type=Nominal	
J=Extension #1	Branch Diameter Type=Nominal	
K=Branch Diameter #2	Hole Adjust=0.000	Seams
L=Branch Length #2	Branch Allowance To Pipe=0.000	S1=None
M=Angle #2	Branch Seam Position=0.000	S2=None
N=Inset #2	Throat Cut Back (Degrees)=0.000	S3=None
O=Extension #2	Cut Back Allowance (%)=0.000	
	End Castle Width =0.000	Damper: None
	End Castle Angle=30.000	None
	-	None
		None

Pattern: 55 Round/Fabrication



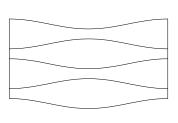
Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Round Allowance To Pipe=0.000	C2=None
C=Left Extension	Flat Allowance To Pipe=0.000	C3=None
D=Right Extension	Pipe Parts=1	
E=Branch Width	Branch Parts=1	
F=Branch Depth	Pipe Seam Position=0.000	
G=Branch Length	Hole Adjust=0.000	
H=Inset	Plate Border=0.000	
I=Offset	Castle Width=0.000	
	Castle Angle=30.000	
	Plate Border (Width)=Auto	Seams
	Same Seams On Each Part=No	S1=None
	Mirror Branch Parts=No	S2=None

Damper:

None

Round





Dims	Options	Conn's
A=Diameter	Number Of Segments=4	C1=None
B=Inner Radius	Seam Position=0.000	C2=None
C=Angle	Cross Break=1	C3=None
D=Bottom Collar	Single Segments=No	
E=Right Collar	Diameter Type=Nominal	

Seams

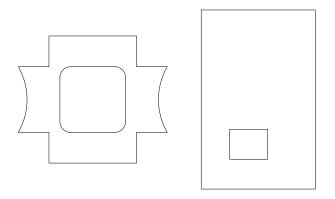
S1=None

Damper:

Pattern: 57

Round



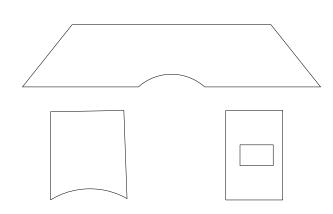


Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Round Allowance To Pipe=0.000	C2=None
C=Left Extension	Flat Allowance To Pipe=0.000	C3=None
D=Right Extension	Pipe Parts=1	
E=Branch Width	Pipe Seam Position=0.000	
F=Branch Depth	Hole Adjust=0.000	
G=Branch Length	Plate Border=0.000	
H=Inset	Castle Width=0.000	
I=Hole Width	Castle Angle=30.000	
J=Hole Depth	Plate Border (Width)=Auto	
K=Hole Radius	Fold Notch Depth=0.000	Seams
L=Collar	Develop Branch Collar=No	S1=None
	·	S2=None
		S3=None

Damper:

Round





Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Round Allowance To Pipe=0.000	C2=None
C=Left Extension	Flat Allowance To Pipe=0.000	C3=None
D=Right Extension	Pipe Parts=1	
E=Branch Width #1	Branch Parts=2	
F=Branch Depth #1	First Break=0.000	
G=Branch Length #1	Second Break=0.000	
H=Branch Inset #1	Third Break=0.000	
I=Branch Extension #1	Pipe Seam Position=270.000	
	Hole Adjust=0.000	
	Plate Border=0.000	Seams
	Castle Width=0.000	S1=None
	Castle Angle=30.000	S2=None
	Plate Border (Width)=Auto	
	Branch Sloping Sides=Central	
		Damper: None
		None
	branch Sloping Sides=Central	•

Pattern: 59

Round



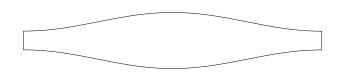
Dims	Options	Conn's
A=Diameter	Cross Break=1	C1=None
B=Centre Diameter	Seam Position=0.000	C2=None
C=Radius	Diameter Type=Nominal	
D=Angle	Diameter=End	

Seams

S1=None

None

Damper:



4/18/2016 courtesy of software 13

Round

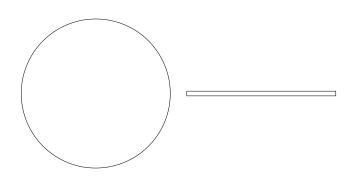
Dims Options Conn's

A=Diameter B=Collar Diameter Type=Nominal C1=None
Correct Holes Rotation=No



Seams

Damper:



Pattern: 61

Round



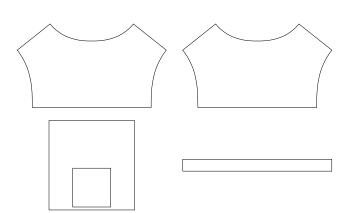
Dims	Options	Conn's
A=Diameter	Number Of Segments=4	C1=None
B=Inner Radius	Seam Position=0.000	C2=None
C=Angle	Cross Break=1	C3=None
D=Bottom Extension	Single Segments=No	
E=Top Extension	Diameter Type=Nominal	
	Automatic Nest Break If Oversize=No	
	Notch Angle For Seam=0	
	Nest Break Start Segment=0	
	Nest Break End Segment=0	
	Marker Type=Notch	
	Diameter Reduction=0.000	Seams
	Marker Depth=Default	S1=None
	Mark Sides=No	
	Leg Lengths=No	
	Fixing Holes On Extension=Yes	
	Splitters=0	Damper: None
	Splitter Adjust=0.000	None None
	Splitter Shape=Angled	None
	Item Volume=Segmented	

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Branch Diameter Type=Nominal	C2=None
C=Left Extension	Branch Diameter Type=Nominal	C3=None
D=Right Extension	Hole Adjust=0.000	
E=Branch Diameter	Round Allowance To Pipe=0.000	
F=Branch Length	Flat Allowance To Pipe=0.000	
G=Angle	Seam Position=0.000	
H=Angle	Pipe Parts=1	
I=Inset	Branch Parts=2	
J=Offset	Flat Right=No	
K=Collar	Inlet=1	Seams
	Outlet=2	S1=None
		S2=None

Damper:



Pattern: 63

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Branch Diameter Type=Nominal	C2=None
C=Left Extension	Branch Diameter Type=Nominal	C3=None
D=Right Extension	Hole Adjust=0.000	
E=Branch Diameter	Round Allowance To Pipe=0.000	
F=Branch Length	Flat Allowance To Pipe=0.000	
G=Angle	Seam Position=0.000	
H=Angle	Pipe Parts=1	
I=Inset	Branch Parts=2	
J=Collar	Flat Right=No	
	Inlet=1	Seams
	Outlet=2	S1=None
		S2=None

Damper:

Round

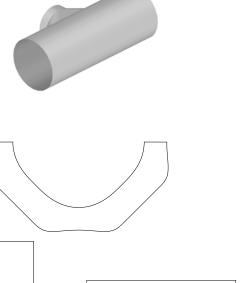


Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Round Allowance To Pipe=0.000	C2=None
C=Left Extension	Flat Allowance To Pipe=0.000	C3=None
D=Right Extension	Pipe Parts=1	
E=Branch Width	Branch Parts=1	
F=Branch Depth	Pipe Seam Position=0.000	
G=Branch Length	Hole Adjust=0.000	
H=Inset	Plate Border=0.000	
I=Extension	Castle Width=0.000	
	Castle Angle=30.000	
	Plate Border (Width)=Auto	Seams
	,	S1=None
		S2=None

Damper:

Pattern: 65

Round



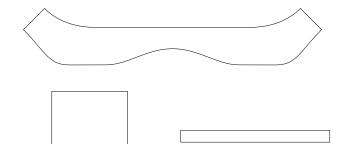
Dime	Ontions	Connis
Dims	Options Ding Parts=1	Conn's
A=Pipe Diameter	Pipe Parts=1	
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	Seam Position=0.000	C3=None
D=Right Extension	Pipe Diameter Type=Nominal	
E=Branch Diameter	Branch Diameter Type=Nominal	
F=Branch Length	Branch Diameter Type=Nominal	
G=Angle	Branch Allowance To Pipe=0.000	
H=Inset	Hole Adjust=0.000	
I=Collar	Plate Border=0.000	
	Plate Type=Rectangular	
	Plate Border (Width)=Auto	Seams
	rate border (Watti) rate	S1=None
		S2=None
		Damper: None
		None
		None

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	Pipe Seam Position=0.000	C3=None
D=Right Extension	Branch Seam Position=Throat	
E=Branch Diameter	Pipe Diameter Type=Nominal	
F=Branch Length	Branch Diameter Type=Nominal	
G=Angle	Branch Diameter Type=Nominal	
H=Inset	Branch Allowance To Pipe=0.000	
I=Collar	Hole Adjust=0.000	
	Straight Notch=No	
	Plate Border=0.000	Seams
	Plate Type=Rectangular	S1=None
	Plate Border (Width)=Auto	S2=None
	Inset=Front	

Damper: None



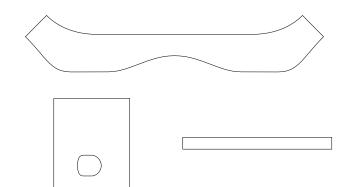
Pattern: 67

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	Pipe Seam Position=0.000	C3=None
D=Right Extension	Branch Seam Position=Throat	
E=Branch Diameter	Pipe Diameter Type=Nominal	
F=Branch Length	Branch Diameter Type=Nominal	
G=Angle	Branch Diameter Type=Nominal	
H=Inset	Branch Allowance To Pipe=0.000	
I=Offset	Hole Adjust=0.000	
J=Collar	Straight Notch=No	
	Plate Border=0.000	Seams
	Plate Type=Rectangular	S1=None
	Plate Border (Width)=Auto	S2=None
	Inset=Front	

Damper: None



Round



Dims	Options	Conn's
A=Diameter	Seam Position=0.000	C1=None
B=Length	Single Segments=No	C2=None
C=Offset	Diameter Type=Nominal	C3=None
D=Left Extension	Cross Break=1	
E=Right Extension	Marker Type=Notch	
F=Left Collar	Seam Position=Angled	
G=Right Collar	Stitch Gap=0.000	
H=Angle	Number Of Stitches=4	
•	Seam Cuts=Straight	
	Automatic Nest Break If Oversize=No	
		Seams

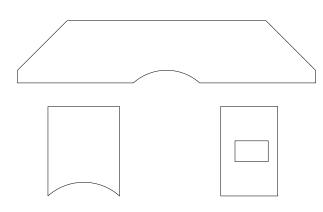
S1=None

Damper: None None

Pattern: 69

Round





Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Round Allowance To Pipe=0.000	C2=None
C=Left Extension	Flat Allowance To Pipe=0.000	C3=None
D=Right Extension	Pipe Parts=1	
E=Branch Width #1	Branch Parts=2	
F=Branch Depth #1	First Break=0.000	
G=Branch Length #1	Second Break=0.000	
H=Branch Inset #1	Third Break=0.000	
I=Branch Extension #1	Pipe Seam Position=270.000	
	Hole Adjust=0.000	
	Plate Border=0.000	Seams
	Throat Clearance=0.000	S1=None
	Castle Width=0.000	S2=None
	Castle Angle=30.000	
	Plate Border (Width)=Auto	
		Damper: None
		None
		None

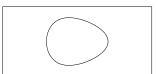
Round



Dims	Options	Conn's
A=Pipe Diameter	Branch Parts=1	C1=None
B=Pipe Length	Pipe Diameter Type=Nominal	C2=None
C=Left Extension	Branch Diameter Type=Nominal	C3=None
D=Right Extension	Hole Adjust=0.000	
E=Branch Diameter #1	Branch Allowance To Pipe=0.000	
F=Branch Length #1	Branch Seam Position=0.000	
G=Angle #1	Throat Cut Back (Degrees)=0.000	
H=Inset #1	Plate Allowance=0.000	
=Offset #1	Cut Back Allowance (%)=0.000	
=Extension #1	Use Pipe Seam For Branches=No	
K=Plate Border	End Castle Width =0.000	Seams
	End Castle Angle=30.000	S1=None
		S2=None

Damper: None None None

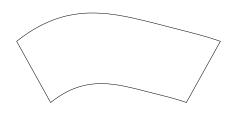




Pattern: 71

Round





Dims	Options	Conn's
A=Diameter In	Diameter Type BE=Nominal	C1=None
B=Diameter Out	Diameter Type SE=Nominal	C2=None
C=Length	Cross Break=1	
D=Y-Offset	Seam Position=0.000	
E=Left Extension	Length Break=1	
F=Right Extension	Marker Type=Notch	
G=Round Angle	Length Includes Extensions=No	

Seams

S1=None

Damper: None None

Round/Fabrication

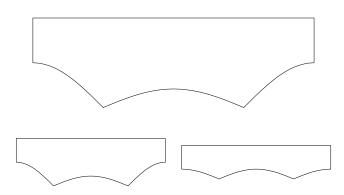


Dims	Options	Conn's
A=Diameter	Diameter Type=Nominal	C1=None
B=Length In	Seam Position=0.000	C2=None
C=Length Out		C3=None
D=Angle		C4=None
E=Bottom Extension		C5=None
F=Left Extension		
G=Right Extension		

Seams

S1=None





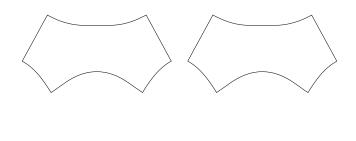
Pattern: 73

Round



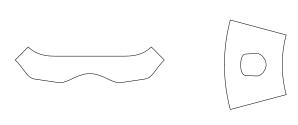
Dims	Options	Conn's
A=Bottom Diameter	Bottom Diameter Type=Nominal	C1=None
B=Left Diameter	Left Diameter Type=Nominal	C2=None
C=Right Diameter	Right Diameter Type=Nominal	C3=None
D=Left End Angle	Seam Position=Top	C4=None
E=Right End Angle	Marker Type=Notch	
F=Left Height		
G=Right Height		
H=Left Offset		
I=Right Offset		
J=Bottom Collar		
K=Left Collar		Seams
L=Right Collar		S1=None
M=Left Offset Depth		
N=Right Offset Depth		

Damper:



Round





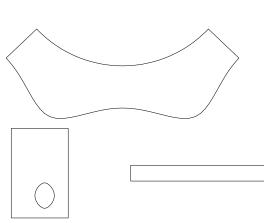
Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Branch Parts=1	C2=None
C=Pipe Length	Pipe Seam Position=270.000	C3=None
D=Left Collar	Branch Seam Position=Throat	
E=Right Collar	Diameter Type BE=Nominal	
F=Branch Diameter	Diameter Type SE=Nominal	
G=Branch Length	Branch Diameter Type=Nominal	
H=Angle	Hole Adjust=0.000	
I=Inset	Branch Allowance To Pipe=0.000	
J=Collar	·	
		Seams

S1=None S2=None

Damper: None None None

Pattern: 75 Round/Fabrication





Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	Seam Position=0.000	C3=None
D=Right Extension	Pipe Diameter Type=Nominal	
E=Branch Diameter	Branch Diameter Type=Nominal	
F=Branch Length	Hole Adjust=0.000	
G=Angle	Branch Allowance To Pipe=0.000	
H=Inset	Branch Seam Position=0.000	
I=Collar	Plate Border=0.000	
J=Btm Width	Plate Type=Rectangular	
	Input=Angle	Seams
	Plate Border (Width)=Auto	S1=None
	Reducer Parts=1	S2=None
		Damper: None
		None
		None

Round



Dims	Options	Conn's
A=Top Diameter	Cross Break=1	C1=None
B=Diameter	Hole Width=0.000	C2=None
C=Bottom Diameter	Hole Length=0.000	C3=None
D=Inner Diameter	Number Of Holes=0	
E=Length	Hole Inset=0.000	
F=Length	Hole Diameter=0.000	
G=Inner Length	Number Of Holes=0	
H=Hole Diameter	Hole Inset=0.000	
I=Pipe Diameter	Hole Diameter=0.000	
J=Pipe Length	Number Of Holes=0	
	Hole Inset=0.000	Seams
	Insertion Point=Default	S1=None
	Rotation=Default	

Damper:





Pattern: 78

Round



0	
0	

Dims	Options	Conn's
A=Diameter	Seam Position=0.000	C1=None
B=Length	Diameter Type=Nominal	C2=None
C=Top Hole Length	Hole=Both	
D=Top Hole Width	Pipe Parts=1	
E=Bottom Hole Length	First Break=0.000	
F=Bottom Hole Width	Second Break=0.000	
	Third Break=0.000	

Seams S1=None

Damper: None None

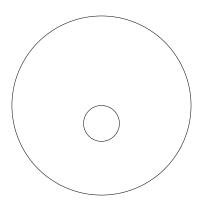
Round

Dims	Options	Conn's
A=Diameter B=Offset		C1=None
C=Diameter D=Collar		C2=None



Seams

Damper:



Pattern: 80

Round



|--|

D '	0.1	6
Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	
E=Branch Diameter #1	Third Break=0.000	
F=Branch Length #1	Seam Position=0.000	
G=Angle #1	Pipe Diameter Type=Nominal	
H=Inset #1	Branch Diameter Type=Nominal	
I=Offset #1	Hole Adjust=0.000	
J=Extension #1	Branch Allowance To Pipe=0.000	
	Branch Seam Position=0.000	Seams
	Throat Cut Back (Degrees)=0.000	S1=None
	Plate Border (Circumference)=0.000	S2=None
	Plate Type=Rectangular	
	Cut Back Allowance (%)=0.000	
	Use Pipe Seam For Branches=No	D N
	Plate Border (Length)=Auto	Damper: None
	Hole Width Adjust=0.000	None
	Hole Depth Adjust=0.000	None
	End Castle Width =0.000	
	End Castle Angle=30.000	

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Left Extension	Branch Diameter Type=Nominal	C2=None
C=Right Extension	Branch Diameter Type=Nominal	C3=None
D=Branch Diameter	Hole Adjust=0.000	
E=Branch Length	Round Allowance To Pipe=0.000	
F=Angle	Flat Allowance To Pipe=0.000	
G=Angle	Seam Position=0.000	
H=Collar	Pipe Parts=1	
	Branch Parts=2	
	Connector Fold Notch=Full Allowance	
	Inlet=1	Seams
	Outlet=2	S1=None
		S2=None

Damper:

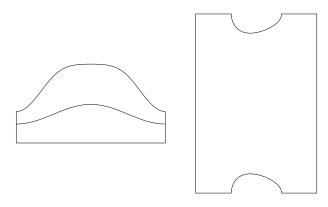
Pattern: 82

Round



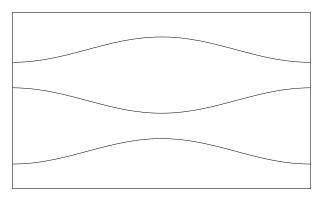
Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	C4=None
E=Branch Diameter	Third Break=0.000	
F=Branch Length	Pipe Diameter Type=Nominal	
G=Angle	Branch Diameter Type=Nominal	
H=Inset	Hole Adjust=0.000	
I=Offset	Branch Allowance To Pipe=0.000	
J=Extension	Throat Cut Back (Degrees)=0.000	
K=Collar	Reducer Parts=1	Seams
	Branch Inset=Front	S1=None
		S2=None





Round/Fabrication





Dims	Options	Conn's
A=Diameter	Number Of Segments=4	C1=None
B=Inner Radius	Seam Position=0.000	C2=None
C=Angle	Cross Break=1	C3=None
D=Bottom Extension	Diameter Type=Nominal	
E=Top Extension	Automatic Nest Break If Oversize=No	
	Notch Angle For Seam=0	
	Stitch Gap=0.000	
	Number Of Stitches=4	
	Quantity=1	
	Nest Break Start Segment=0	
	Nest Break End Segment=0	Seams
	Marker Type=Notch	S1=None
	Diameter Reduction=0.000	
	Marker Depth=Default	
	Mark Sides=No	
	Leg Lengths=No Fixing Holes On Extension=Yes	Damper: None None
	Item Volume=Segmented	

Pattern: 85 Rectangular/Round



D	ims	Options	Conn's
A=Width	B=Depth	Diameter Type=Nominal	C1=None
C=Diameter	D=Extension	Top Offset=0.000	C2=None
E=Collar			

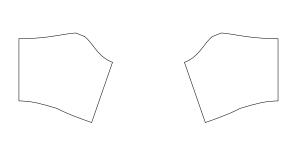
Seams S1=None

Damper:



Round





Dims	Options	Conn's
A=Bottom Diameter	Add Collars To Body=No	C1=None
B=Left Diameter	Flat Left=No	C2=None
C=Right Diameter	Notch Angle For Seam=0.000	C3=None
D=Height	Slope Angle=0.000	
E=Length		
F=Left Angle		
G=Right Angle		
H=Bottom Collar		
I=Left Collar		
J=Right Collar		
-		Seams
		S1=None

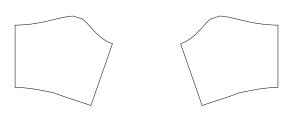
S2=None

Damper:

Pattern: 87

Round



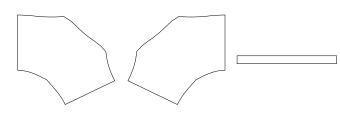


Dims	Options	Conn's
A=Bottom Diameter	Add Collars To Body=No	C1=None
B=Left Diameter	Flat Left=No	C2=None
C=Right Diameter	Notch Angle For Seam=0.000	C3=None
D=Height	Slope Angle=0.000	
E=Length	_	
F=Left Angle		
G=Right Angle		
H=Bottom Collar		
I=Left Collar		
J=Right Collar		
· ·		Seams
		S1=None
		S2=None
		Damnari
		Damper:

Round



Dims	Options	Conn's
A=Bottom Diameter	Add Collars To Body=No	C1=None
B=Left Diameter	Flat Left=No	C2=None
C=Right Diameter	Notch Angle For Seam=0.000	C3=None
D=Diameter	Slope Angle=0.000	C4=None
E=Height		
F=Length		
G=Left Angle		
H=Right Angle		
I=Bottom Collar		
J=Left Collar		
K=Right Collar		Seams
L=Collar		S1=None
		S2=None



Pattern: 89

Round



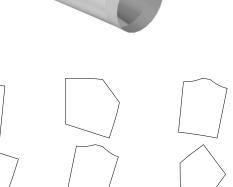
Dims	Options	Conn's
A=Bottom Diameter	Add Collars To Body=No	C1=None
B=Left Diameter	Flat Left=No	C2=None
C=Right Diameter	Notch Angle For Seam=0.000	C3=None
D=Diameter	Slope Angle=0.000	C4=None
E=Diameter		C5=None
F=Height		
G=Length		
H=Left Angle		
I=Right Angle		
J=Bottom Collar		
K=Left Collar		Seams
L=Right Collar		S1=None
M=Collar		S2=None
N=Collar		

Damper:

Damper:

Round





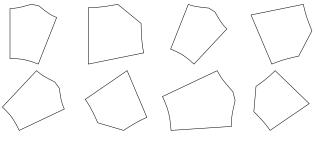
Dims	Options	Conn's
A=Bottom Diameter		C1=None
B=Top Diameter #2		C2=None
C=Top Diameter #3		C3=None
D=Top Diameter #4		C4=None
E=Height		
F=Length		
G=Angle #2		
H=Angle #3		
I=Angle #4		
J=Bottom Collar		
K=Collar #2		Seams
L=Collar #3		S1=None
M=Collar #4		S2=None
		S3=None

Damper:

Pattern: 91

Round

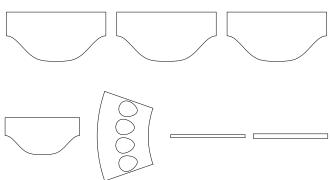




Dims	Options	Conn's
A=Bottom Diameter	- 1	C1=None
B=Top Diameter #2		C2=None
C=Top Diameter #3		C3=None
D=Top Diameter #4		C4=None
E=Top Diameter #5		C5=None
F=Height		
G=Length		
H=Angle #2		
I=Angle #3		
J=Angle #4		
K=Angle #5		Seams
L=Bottom Collar		S1=None
M=Collar #2		S2=None
N=Collar #3		S3=None
O=Collar #4		
P=Collar #5		Damper:

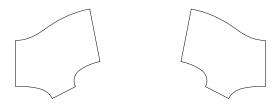
Round





Pattern:	93
Round	





	Dims	Options	Conn's
	A=Pipe Diameter	Pipe Parts=1	C1=None
	B=Pipe Diameter	Branch Parts=1	C2=None
	C=Pipe Length	First Break=0.000	C3=None
	D=Left Extension	Second Break=0.000	C4=None
	E=Right Extension	Third Break=0.000	C5=None
	F=Branch Diameter #1	Seam Position=45.000	C6=None
	G=Branch Length #1	Diameter Type BE=Nominal	
	H=Angle #1	Diameter Type SE=Nominal	
	I=Inset #1	Branch Diameter Type=Nominal	
	J=Rotation #1	Branch Diameter Type=Nominal	
	K=Extension #1	Branch Diameter Type=Nominal	Seams
	L=Branch Diameter #2	Branch Diameter Type=Nominal	S1=None
	M=Branch Length #2	Hole Adjust=0.000	S2=None
	N=Angle #2	Branch Allowance To Pipe=0.000	S3=None
	O=Inset #2	Branch Seam Position=0.000	S4=None
	P=Rotation #2	Throat Cut Back (Degrees)=0.000	S5=None Damper: None
	Q=Extension #2	Cut Back Allowance (%)=0.000	None
	R=Branch Diameter #3	End Castle Width =0.000	None
J	S=Branch Length #3	End Castle Angle=30.000	None
	T=Angle #3		None
	U=Inset #3		None
	V=Rotation #3		
	W=Extension #3		
	X=Branch Diameter #4		
	Y=Branch Length #4		
_	Z=Angle #4		
	a=Inset #4		
	b=Rotation #4		

	Dims	Options
A:	Bottom Diameter	Bottom Diameter Type=Nomina
B:	=Top Diameter	Left Diameter Type=Nominal
C:	Branch Diameter	Right Diameter Type=Nominal
D:	=Angle	2 Parts=Yes
E:	Right Offset	
F=	=Height	

COIIII 3
C1=None
C2=None
C3=None

5	e	a	Ì	n	S

S1=None

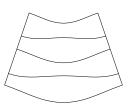
Damper:

4/18/2016 29

G=Bottom Collar H=Top Collar I=Branch Collar

Round





Dims	Options	Conn's
A=Bottom Diameter	Number Of Segments=4	C1=None
B=Top Diameter	Seam Position=0.000	C2=None
C=Centre Radius	Cross Break=1	C3=None
D=Angle	Single Segments=No	
E=Bottom Collar F=Right Collar	Diameter Type=Nominal	

Seams

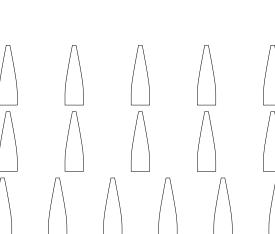
S1=None

Damper:

Pattern: 96

Round





Dims	Options	Conn's
A=Bottom Diameter	Number Of Segments=16	C1=None
B=Top Diameter	Parts To Cut=16	
C=Height	Input=Height	
D=Top Radius	Bottom Diameter Type=Nominal	
E=Bottom Radius	Top Diameter Type=Nominal	
F=Bottom Extension	Top Diameter=Slice	
G=Collar	Fixing Holes=2	
H=Branch Diameter	Fixing Hole Diameter=None	
I=Branch Length	Hole Inset=25.000	
J=Offset	Branch Parts=1	
	Branch Seam Position=0.000	Seams
	Turnover Allowance=0.000	S1=None
	Template=No	
	Hole Spacing=0.000	
	Hole Spacing (Shoulder)=0.000	
	Bottom Extension Parts=0	Damper:

Round



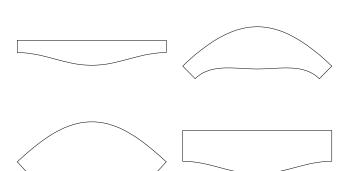
Dims	Options	Conn's
A=Bottom Diameter	Number Of Segments=4	C1=None
B=Top Diameter	Seam Position=0.000	C2=None
C=Centre Radius	Cross Break=1	C3=None
D=Angle	Bottom Diameter Type=Nominal	
E=Bottom Extension	Marker Type=Notch	
F=Top Extension	Top Diameter Type=Nominal	
	Marker Depth=Default	
	Mark Sides=No	
	Leg Lengths=No	

Seams

S1=None

Damper: None

None



Pattern: 98

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Branch Diameter Type=Nominal	C2=None
C=Left Extension	Branch Diameter Type=Nominal	C3=None
D=Right Extension	Hole Adjust=0.000	
E=Branch Diameter	Round Allowance To Pipe=0.000	
F=Branch Length	Flat Allowance To Pipe=0.000	
G=Angle	Seam Position=0.000	
H=Angle	Pipe Parts=1	
I=Inset	Branch Parts=2	
J=Collar	Flat Right=No	
	Inlet=1	Seams
	Outlet=2	S1=None
		S2=None

Damper:

Round



Dims	Options	Conn's
A=Bottom Diameter	Bottom Diameter Type=Nominal	C1=None
B=Left Diameter	Left Diameter Type=Nominal	C2=None
C=Right Diameter	Right Diameter Type=Nominal	C3=None
D=Left Angle	Seam Position=Top	C4=None
E=Right Angle	Marker Type=Notch	
F=Bottom Collar		
G=Left Collar		
H=Right Collar		

Seams

S1=None





Damper:

Pattern: 100

Round



Dims	Options	Conn's
A=Bottom Diameter	Bottom Diameter Type=Nominal	C1=None
B=Left Diameter	Left Diameter Type=Nominal	C2=None
C=Right Diameter	Right Diameter Type=Nominal	C3=None
D=Left Angle	Seam Position=Top	C4=None
E=Right Angle	Marker Type=Notch	
F=Left Length		
G=Right Length		
H=Height		
I=Bottom Collar		
J=Left Collar		
K=Right Collar		Seams
		S1=None





Damper:

Round/Flat Oval



Dims	Options	Conn's
A=Width	Cross Break=2	C1=None
B=Depth	Diameter Type BE=Nominal	C2=None
C=Diameter	Diameter Type SE=Nominal	
D=Length	Seam Position=Corner	
E=Offset Width	Inlet=1	
F=Offset Depth	Outlet=2	
G=Oval Collar	Same Seams On Each Part=No	
H=Round Collar		
H=Round Collar		

S1=None

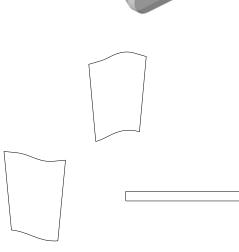
Seams

Damper:



Pattern: 123 Round/Flat Oval





Dims	Options	Conn's
A=Width	Diameter Type BE=Nominal	C1=None
B=Depth	Diameter Type SE=Nominal	C2=None
C=Diameter	Seam Position=Major Axis	
D=Length	Inlet=1	
E=Offset Width	Outlet=2	
F=Offset Depth	Same Seams On Each Part=No	
G=Oval Collar		
H=Round Collar		

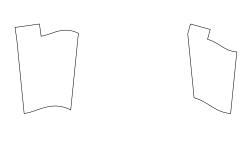
Seams S1=None

Damper:

courtesy of Applied Software 4/18/2016 33

Round/Flat Oval





Dims	Options	Conn's
A=Width	Cross Break=2	C1=None
B=Depth	Diameter Type BE=Nominal	C2=None
C=Diameter	Diameter Type SE=Nominal	
D=Length	Collar Arcs - Lap=0.000	
E=Offset Width	Collar Arcs - Allowance=0.000	
F=Offset Depth	Seam Position=Corner	
G=Oval Extension	Inlet=1	
H=Oval Collar	Outlet=2	
I=Round Collar	Same Seams On Each Part=No	
	Oval Half Collar=Yes	

Seams S1=None

Damper:

Pattern: 142

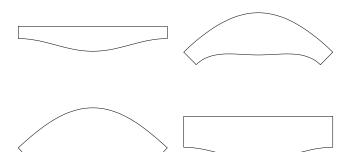
Round



Dims	Options	Conn's
A=Bottom Diameter	Number Of Segments=4	C1=None
B=Top Diameter	Seam Position=0.000	C2=None
C=Centre Radius	Cross Break=1	C3=None
D=Angle	Bottom Diameter Type=Nominal	
E=Offset	Marker Type=Notch	
F=Bottom Extension	Top Diameter Type=Nominal	
G=Top Extension	Marker Depth=Default	
	Mark Sides=No	
	Leg Lengths=No	

Seams S1=None

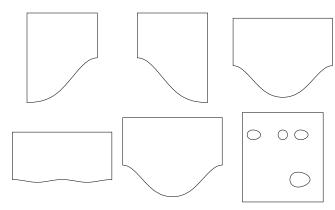
Damper: None None



courtesy of Applied Software 4/18/2016 34

Round





	Dims	Opt	ions	Conn's
	A=Pipe Diameter	Pipe Parts=1	Hole Adjust=0.000	C1=None
	B=Pipe Length	First Break=0.000	Castle Width=0.000	C2=None
	C=Left Extension	Second Break=0.000	Castle Angle=30.000	C3=None
	D=Right Extension	Third Break=0.000	Round Allowance T	C4=None
	E=Branch Diameter #1	Seam Position=0.000	Flat Allowance To P	C5=None
	F=Branch Length #1	Pipe Diameter Typ	Hole Adjust=0.000	C6=None
	G=Angle #1	Branch Type=Straig	Castle Width=0.000	
	H=Inset #1	Branch Diameter T	Castle Angle=30.000	
	I=Offset #1	Branch Parts=2	Round Allowance T	
	J=Rotation #1	Branch Type=Straig	Flat Allowance To P	
	K=Extension #1	Branch Diameter T	Hole Adjust=0.000	Seams
	L=Branch Diameter #2	Branch Parts=1	Castle Width=0.000	S1=None
	M=Branch Length #2	Branch Type=Straig	Castle Angle=30.000	S2=None
	N=Angle #2	Branch Diameter T		S3=None
	O=Inset #2	Branch Parts=1		S4=None
,	P=Offset #2	Branch Type=Straig		S5=None Damper:
	Q=Rotation #2	Branch Diameter T		
	R=Extension #2	Branch Parts=1		
	S=Branch Diameter #3	Diameter Reductio		
	T=Branch Length #3	Shoe Seam Position		
	U=Angle #3	Handle Inline with		
	V=Inset #3	Round Allowance T		
	W=Offset #3	Flat Allowance To P		
	X=Rotation #3	Hole Adjust=0.000		
	Y=Extension #3	Castle Width=0.000		
	Z=Branch Diameter #4	Castle Angle=30.000		
	a=Branch Length #4	Round Allowance T		
	b=Angle #4	Flat Allowance To P		

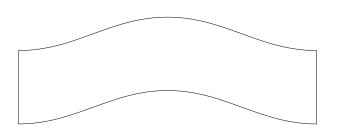
Pattern: 149

Round



Dims	Options	Conn's
A=Diameter	Cross Break=1	C1=None
B=Length	Seam Position=0.000	C2=None
C=Angle	Vertical=No	C3=None
D=Body Diameter	Pipework=No	
	Adjust=0.000	
	Include=Yes	
	Right Offset=6.000	
	Left Offset=6.000	
	Develop X Size For Diameter=No	
	Inlet=1	
	Outlet=2	Seams
		S1=None

Damper:



Round

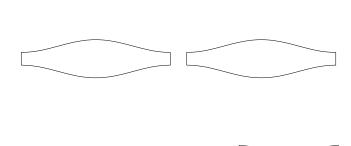


Dims	Options	Conn's
A=Diameter	Seam Position=0.000	C1=None
B=Height	Top Number Of Segments=2	C2=None
C=Top Radius	Bottom Number Of Segments=2	C3=None
D=Top Angle	Single Segments=Yes	
E=Top Extension	Diameter Type=Nominal	
F=Bottom Radius	Marker Type=Notch	
G=Bottom Angle	Item Pattern Length/Angle=Length	
H=Bottom Extension		
I=Twist Angle		

Seams

S1=None

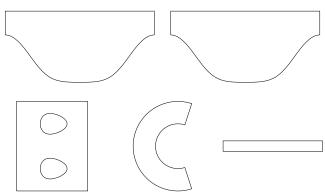
Damper:



Pattern: 160

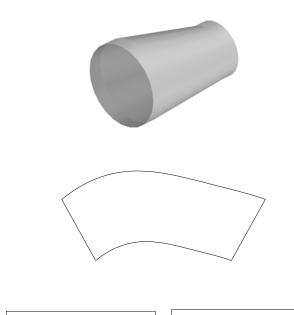
Round





	Dims	Options	Conn's
	A=Pipe Diameter	Pipe Parts=1	C1=None
	B=Right Diameter	Branch Parts=1	C2=None
	C=Pipe Length	First Break=0.000	C3=None
	D=Right Length	Second Break=0.000	C4=None
	E=Left Extension	Third Break=0.000	C5=None
	F=Right Extension	Seam Position=0.000	
	G=Branch Diameter #1	Pipe Diameter Type=Nominal	
	H=Branch Length #1	Branch Diameter Type=Nominal	
	I=Angle #1	Branch Diameter Type=Nominal	
	J=Inset #1	Hole Adjust=0.000	
	K=Offset #1	Branch Allowance To Pipe=0.000	Seams
	L=Extension #1	Branch Seam Position=0.000	S1=None
	M=Branch Diameter #2	Throat Cut Back (Degrees)=0.000	S2=None
	N=Branch Length #2	Right Diameter Type=Nominal	S3=None
	O=Angle #2	Plate Border (Circumference)=0.000	
	P=Inset #2	Plate Type=Rectangular	Damper: None
	Q=Offset #2	Cut Back Allowance (%)=0.000	None
	R=Rotation #2	Use Pipe Seam For Branches=No	None
	S=Extension #2	Plate Border (Length)=Auto	None
		End Castle Width =0.000	None
		End Castle Angle=30.000	None
		Reducer Parts=1	
		Seam Position=0.000	
		First Break=0.000	
1		Second Break=0.000	
J		Third Break=0.000	

Round/Fabrication



Dims	Options	Conn's
A=Diameter In	Diameter Type BE=Nominal	C1=None
B=Diameter Out	Diameter Type SE=Nominal	C2=None
C=Length	Cross Break=1	
D=Y-Offset	Seam Position=0.000	
E=X-Offset	Length Break=1	
F=Left Extension	Marker Type=Notch	
G=Right Extension	Length Includes Extensions=No	
H=Round Angle	Offset Width=Left In	
•	Offset Depth=Bottom Up	

Seams

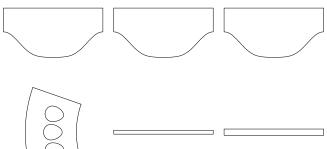
S1=None

Damper: None None

Pattern: 169

Round

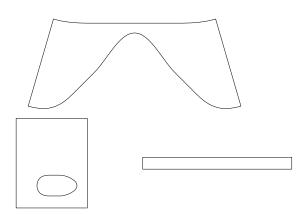




Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Branch Parts=1	C2=None
C=Pipe Length	First Break=0.000	C3=None
D=Left Extension	Second Break=0.000	C4=None
E=Right Extension	Third Break=0.000	C5=None
F=Branch Diameter #1	Seam Position=0.000	
G=Branch Length #1	Diameter Type BE=Nominal	
H=Angle #1	Diameter Type SE=Nominal	
I=Inset #1	Branch Diameter Type=Nominal	
J=Offset #1	Branch Diameter Type=Nominal	
K=Rotation #1	Branch Diameter Type=Nominal	Seams
L=Extension #1	Hole Adjust=0.000	S1=None
M=Branch Diameter #2	Branch Allowance To Pipe=0.000	S2=None
N=Branch Length #2	Branch Seam Position=0.000	S3=None
O=Angle #2	Throat Cut Back (Degrees)=0.000	S4=None
P=Inset #2	Cut Back Allowance (%)=0.000	Damper: None
Q=Offset #2	End Castle Width =0.000	None
R=Rotation #2	End Castle Angle=30.000	None
S=Extension #2		None
T=Branch Diameter #3		None
U=Branch Length #3		
V=Angle #3		
W=Inset #3		
X=Offset #3		
Y=Rotation #3		
Z=Extension #3		

Round





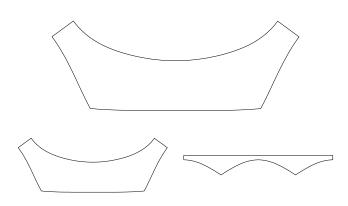
Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Left Extension	Branch Parts=1	C2=None
C=Right Extension	Seam Position=0.000	C3=None
D=Branch Diameter	Seam Position=Throat	
E=Branch Length	Pipe Diameter Type=Nominal	
F=Inset	Branch Diameter Type=Nominal	
G=Length In	Branch Allowance To Pipe=0.000	
H=Length Out	Hole Adjust=0.000	
I=Angle	Diameter Reduction=0.000	
J=Collar	Plate Border (Width)=0.000	
	Plate Border (Depth)=Equal	Seams
	Plate Type=Rectangular	S1=None
		S2=None

Damper:

Pattern: 171

Round





Dims	Options	Conn's
A=Bottom Diameter	Bottom Diameter Type=Nominal	C1=None
B=Btm Length	Left Diameter Type=Nominal	C2=None
C=Left Diameter	Right Diameter Type=Nominal	C3=None
D=Left Length	Seam Position=Top	C4=None
E=Left Angle		
F=Right Diameter		
G=Right Length		
H=Right Angle		
I=Height		
J=Base Height		
K=Bottom Extension		Seams
L=Left Collar		S1=None
M=Right Collar		

Damper:

Round

Dims	Options	Conn's
A=Diameter	Cross Break=1	C1=None
B=Top Diameter	Seam Position=0.000	C2=None
C=Radius	Diameter Type=Nominal	
D=Angle		



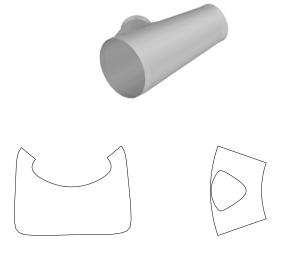
Seams S1=None

Damper:



Pattern: 173

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Branch Parts=1	C2=None
C=Pipe Length	First Break=0.000	C3=None
D=Left Extension	Second Break=0.000	
E=Right Extension	Third Break=0.000	
F=Branch Diameter #1	Seam Position=270.000	
G=Branch Length #1	Diameter Type BE=Nominal	
H=Angle #1	Diameter Type SE=Nominal	
I=Inset #1	Branch Diameter Type=Nominal	
J=Extension #1	Hole Adjust=0.000	
	Branch Allowance To Pipe=0.000	Seams
	Branch Seam Position=0.000	S1=None
	Throat Cut Back (Degrees)=0.000	S2=None
	Cut Back Allowance (%)=0.000	
	End Castle Width =0.000	
	End Castle Angle=30.000	Damper: None
	· ·	•
		None

Round/Flat Oval

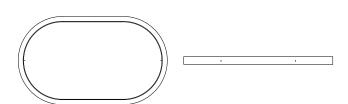


Di	ms	Options	Conn's
A=Diameter	B=Depth	Diameter Type=Nominal	
C=Flange	D=Collar	Adjustment=0.200	
E=Gaps	F=Hole #1	Vee Notch Depth=0.120	
G=Hole #2	H=Hole Inset	Vee Notch Angle=10.000	
		Collar Marker Notches=No	
		Collar Seam Position=Major Axis	

Seams

S1=None

Damper:



Pattern: 183

Round



|--|--|

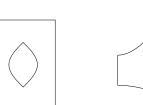
Dims	Options	Conn's
A=Diameter	Seam Position=0.000	C1=None
B=Length	Pipe Parts=1	C2=None
C=Left Extension	Pipe Diameter Type=Nominal	
D=Right Extension	Lap=0.000	
E=Centre Length	Vee Notch Angle=20.000	
F=Centre Depth	Vee Notch Depth=0.000	
G=Inset	Use Vee Notch=Yes	
H=Angle	Separate Cut Out=Yes	
	Cut Out=1	

Seams S1=None S2=None S3=None

Damper:

Round





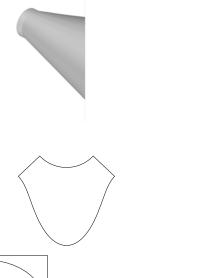


Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Pipe Seam Position=270.000	C2=None
C=Left Extension	Pipe Parts=1	C3=None
D=Right Extension	First Break=0.000	C4=None
E=Diameter	Second Break=0.000	
F=Centre Radius	Third Break=0.000	
G=Angle	Branch Diameter Type=Nominal	
H=Inset #1	Branch Seam Position=0.000	
I=Height	Cross Break=1	
J=Twist Angle	Number Of Segments=4	
K=Top Extension	Single Segments=Yes	Seams
	Nest Break Start Segment=0	S1=None
	Nest Break End Segment=0	S2=None
	Marker Type=Notch	
	Hole Adjust=0.000	
	Notch Angle For Seam=0	Damper:
	Stitch Gap=0.000	Damper.

Number Of Stitches=4 Branch Allowance To Pipe=0.000

Pattern: 186

Round

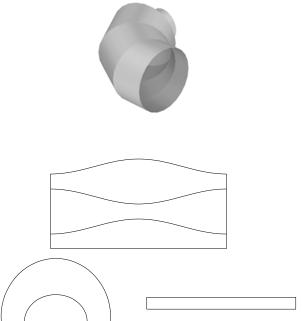


Dims	Options	Conn's
A=Bottom Diameter	Diameter Type=Nominal	C1=None
B=Top Diameter	Cross Break=1	C2=None
C=Length	Seam Position=0.000	
D=Collar	Hole Adjust=0.000	
E=Slope Angle	Turnover=0.000	
F=Border	Type=None	
G=Cone Angle		

Seams S1=None

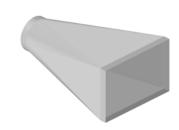
Damper: None

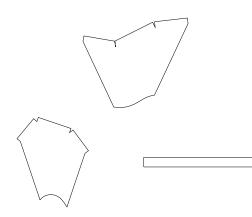
Round



Dims	Options	Conn's
A=Bottom Diameter	Number Of Segments=4	C1=None
B=Top Diameter	Seam Position=0.000	C2=None
C=Inner Radius	Cross Break=1	C3=None
D=Angle	Single Segments=No	
E=Bottom Extension	Bottom Diameter Type=Nominal	
F=Top Extension	Automatic Nest Break If Oversize=No	
G=Extension	Notch Angle For Seam=0	
	Nest Break Start Segment=0	
	Nest Break End Segment=0	
	Marker Type=Notch	
	Top Diameter Type=Nominal	Seams
	Marker Depth=Default	S1=None
	Mark Sides=No	
	Leg Lengths=No	
	Fixing Holes On Extension=Yes	
		Damper: None
		None

Pattern: 254 Rectangular/Round





Dims	Options	Conn's
A=Width	Cross Break=2	C1=None
B=Depth	Length Break=1	C2=None
C=Diameter	Diameter Type=Nominal	
D=Length	Seam Position=Width	
E=Offset Width	Marker Type=Notch	
F=Offset Depth	Input=Length	
G=Extension	Offset Width=Left In	
H=Collar	Offset Depth=Bottom Up	
I=Corner Radius	Inlet=1	
J=Slope Angle	Outlet=2	
	Maximum Angle=180.000	Seams
	Fold Notch Depth=Full Allowance	S1=None
	V Notch Rectangular Extension=No	
	Seam Cut Back=None	
	Cut Back Allowance (%)=50.000	
	2 Parts 90 Degrees Seam=No	Damper: None

Round



Dims	Options	Conn's
A=Radius	Six Parts Left Lap=None	C1=None
B=Angle	Six Parts Right Lap=None	C2=None
C=Length	Seam Position=Left	C3=None
D=Front Hole Diameter		
E=Six Parts Left Height		
F=Six Parts Right Height		
G=Pipe Diameter		
H=Turnover Allowance		

Seams

S1=None

Damper:







Pattern: 311

Round



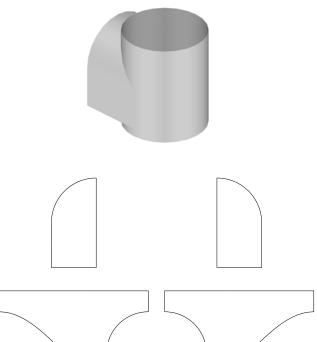
		7
]

Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Branch Diameter Type=Nominal	C2=None
C=Left Extension	Branch Diameter Type=Nominal	C3=None
D=Right Extension	Hole Adjust=0.000	
E=Branch Diameter	Round Allowance To Pipe=0.000	
F=Branch Length	Flat Allowance To Pipe=0.000	
G=Branch Width	Seam Position=0.000	
H=Distance	Pipe Parts=1	
I=Distance	Branch Parts=2	
J=Offset	Branch Seam Position=Sides	
K=Collar	Flat Right=No	Seams
	Inlet=1	S1=None
	Outlet=2	S2=None

Damper:

courtesy of 4/18/2016 43

Round



Dims	Options	Conn's
A=Radius	Six Parts Left Lap=None	C1=None
B=Depth	Six Parts Right Lap=None	C2=None
C=Angle	Vee Depth Female=0.000	C3=None
D=Length	Vee Angle Female=30.000	
E=Front Hole Diameter F=Six Parts Left Height G=Six Parts Right Height H=Pipe Diameter I=Turnover Allowance	Allowance=Left	

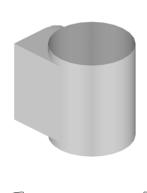
Seams

S1=None

Damper:

Pattern: 316

Round



Dims	Options	Conn's
A=Radius	Six Parts Left Lap=None	C1=None
B=Depth	Six Parts Right Lap=None	C2=None
C=Angle	Vee Depth Female=0.000	C3=None
D=Length	Vee Angle Female=30.000	
E=Front Hole Diameter	Allowance=Left	
F=Six Parts Left Height		
G=Six Parts Right Height		
H=Pipe Diameter		
I=Turnover Allowance		
		Seams

S1=None

Damper:

Round

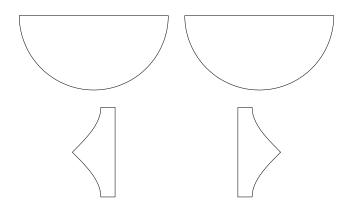


Dims	Options	Conn's
A=Radius	Six Parts Left Lap=None	C1=None
B=Length	Six Parts Right Lap=None	C2=None
C=Front Hole Diameter D=Six Parts Left Height E=Six Parts Right Height F=Pipe Diameter G=Turnover Allowance	Seam Position=Left	C3=None

Seams

S1=None

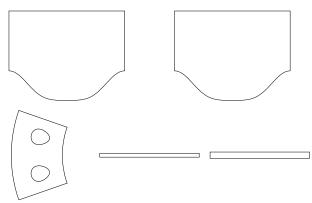
Damper:



Pattern: 323

Round

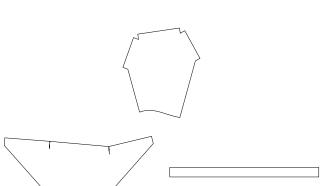




Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Branch Parts=1	C2=None
C=Pipe Length	First Break=0.000	C3=None
D=Left Extension	Second Break=0.000	C4=None
E=Right Extension	Third Break=0.000	
F=Branch Diameter #1	Seam Position=180.000	
G=Angle #1	Diameter Type BE=Nominal	
H=Inset #1	Diameter Type SE=Nominal	
I=Extension #1	Branch Diameter Type=Nominal	
J=Branch Diameter #2	Branch Diameter Type=Nominal	
K=Angle #2	Hole Adjust=0.000	Seams
L=Inset #2	Branch Allowance To Pipe=0.000	S1=None
M=Extension #2	Branch Seam Position=0.000	S2=None
	Throat Cut Back (Degrees)=0.000	S3=None
	Cut Back Allowance (%)=0.000	
	End Castle Width =0.000	Damper: None
	End Castle Angle=30.000	None

Rectangular/Round





Dims	Options	Conn's
A=Width	Cross Break=2	C1=None
B=Depth	Length Break=1	C2=None
C=Diameter	Diameter Type=Nominal	
D=Offset Width	Seam Position=Width	
E=Offset Depth	Marker Type=Notch	
F=Extension	Offset Width=Left In	
G=Collar	Offset Depth=Bottom Up	
H=Round Angle	Inlet=1	
I=Twist Angle	Outlet=2	
J=Inner Radius	Fold Notch Depth=Full Allowance	
K=Corner Radius	V Notch Rectangular Extension=No	Seams
	Seam Cut Back=None	S1=None
	Cut Back Allowance (%)=50.000	
	2 Parts 90 Degrees Seam=No	

Damper: None

Pattern: 325

Round



Dims	Options	Conn's
A=Bottom Diameter	Bottom Diameter Type=Nominal	C1=None
B=Left Diameter	Left Diameter Type=Nominal	C2=None
C=Right Diameter	Right Diameter Type=Nominal	C3=None
D=Left Angle	2 Parts=Yes	
E=Right Angle		
F=Left Length		
G=Right Length		
H=Bottom Collar		
I=Left Collar		
J=Right Collar		
		Seams
		S1=None

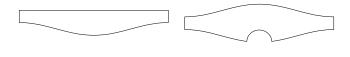
Damper:

Round



Dims	Options	Conn's
A=Diameter	Number Of Segments=4	C1=None
B=Inner Radius	Seam Position=0.000	C2=None
C=Angle	Pipe Diameter Type=Nominal	C3=None
D=Bottom Extension	Branch Diameter Type=Nominal	C4=None
E=Top Extension	Marker Type=Notch	
F=Branch Diameter	Tap Segment=2	
G=Branch Length	Branch Allowance To Pipe=0.000	
H=Branch Angle	Full Intersections=No	
I=Branch Extension		
J=X-Offset		
K=Y-Offset		Seams
L=Branch Inset		S1=None
		S2=None

Damper:





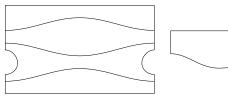
Pattern: 327

Round



Dims	Options	Conn's
A=Diameter	Number Of Segments=4	C1=None
B=Inner Radius	Seam Position=0.000	C2=None
C=Angle	Single Segments=No	C3=None
D=Bottom Extension	Pipe Diameter Type=Nominal	C4=None
E=Top Extension	Branch Diameter Type=Nominal	
F=Branch Diameter	Marker Type=Notch	
G=Branch Length	Tap Segment=2	
H=Branch Angle	Branch Allowance To Pipe=0.000	
I=Branch Extension	Full Intersections=No	
J=X-Offset		
K=Y-Offset		Seams
L=Branch Inset		S1=None
		S2=None

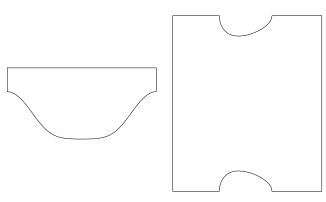
Damper:





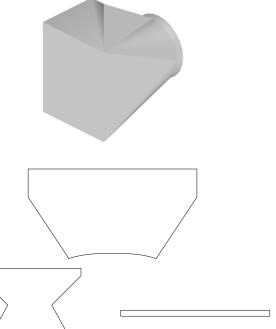
Round





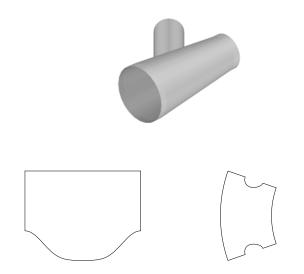
Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	
E=Branch Diameter #1	Third Break=0.000	
F=Branch Length #1	Pipe Diameter Type=Nominal	
G=Angle #1	Branch Diameter Type=Nominal	
H=Inset #1	Hole Adjust=0.000	
=Extension #1	Branch Allowance To Pipe=0.000	
	Branch Seam Position=0.000	
	Throat Cut Back (Degrees)=0.000	Seams
	Plate Border (Circumference)=0.000	S1=None
	Plate Type=Rectangular	S2=None
	Cut Back Allowance (%)=0.000	
	Use Pipe Seam For Branches=No	
	Plate Border (Length)=Auto	Damper: None
	End Castle Width =0.000	None None
	End Castle Angle=30.000	None

Pattern: 338
Rectangular/Round



Dims	Options	Conn's
A=Width	Diameter Type=Nominal	C1=None
B=Depth	Marker Type=Notch	C2=None
C=Diameter		
D=Length		
E=Extension		
F=End Height		
G=Offset		
H=Collar		
I=Bottom Chamfer		
J=Back Chamfer		
		Seams
		S1=None
		S2=None
		Damper:

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Branch Parts=1	C2=None
C=Pipe Length	First Break=0.000	C3=None
D=Left Extension	Second Break=0.000	
E=Right Extension	Third Break=0.000	
F=Branch Diameter #1	Seam Position=90.000	
G=Angle #1	Diameter Type BE=Nominal	
H=Inset #1	Diameter Type SE=Nominal	
I=Extension #1	Branch Diameter Type=Nominal	
	Hole Adjust=0.000	
	Branch Allowance To Pipe=0.000	Seams
	Branch Seam Position=0.000	S1=None
	Throat Cut Back (Degrees)=0.000	S2=None
	Cut Back Allowance (%)=0.000	
	End Castle Width =0.000	
	End Castle Angle=30.000	Damper: None
		None
		None

Pattern: 344

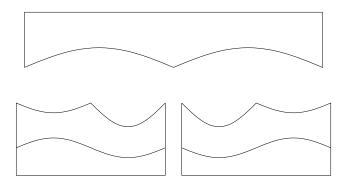
Round



Dims	Options	Conn's
A=Diameter	Diameter Type=Nominal	C1=None
B=Length In	Single Segments=No	C2=None
C=Length Out	Marker Type=Notch	C3=None
D=X-Offset		C4=None
E=Y-Offset		C5=None
F=Extension In		
G=Extension Out		

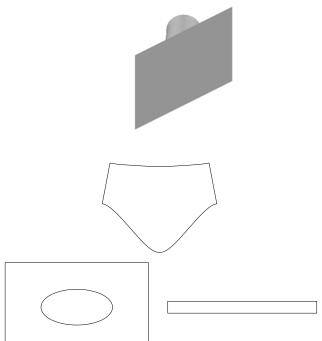
Seams S1=None

Damper:



courtesy of Applied Software 4/18/2016 49

Round



Dims	Options	Conn's
A=Hole Diameter	Branch Parts=1	C1=None
B=Branch Diameter	Plate Parts=1	C2=None
C=Length	Seam Position=0.000	
D=Angle	Hole Type=Oval	
E=Plate Width	Hole Adjust=0.000	
F=Plate Depth	Diameter Type=Nominal	
G=Offset Width	Turnover=0.000	
H=Offset Depth	Item Pattern Length/Angle=Length	
I=Collar	Use Marker Notch (OM End)=Yes	
J=Hole Depth	Notch Hole Ends=No	
K=Bottom Width	Dynamic Hole Adjust=Auto	Seams
		S1=None
		S2=None

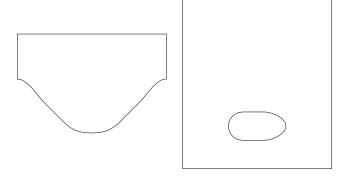
Damper: None

Pattern: 355

Round



Dims	Options	Conn's
A=Width	Pipe Parts=1	C1=None
B=Length	Branch Parts=1	C2=None
C=Left Extension	Pipe Diameter Type=Nominal	C3=None
D=Right Extension	Branch Diameter Type=Nominal	
E=Branch Width #1	Seam Position=0.000	
F=Branch Depth #1	Branch Allowance To Pipe=0.000	
G=Branch Length #1	True Oval Straight=No	
H=Angle #1		
I=Inset #1		
J=Extension #1		
		Seams
		S1=None
		S2=None



Damper:

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Branch Diameter Type=Nominal	C2=None
C=Left Extension	Branch Diameter Type=Nominal	C3=None
D=Branch Diameter	Hole Adjust=0.000	
E=Branch Length	Round Allowance To Pipe=0.000	
F=Angle	Flat Allowance To Pipe=0.000	
G=Collar	Seam Position=0.000	
	Pipe Parts=1	
	Branch Parts=2	
	Connector Fold Notch=Full Allowance	
	Inlet=1	Seams
	Outlet=2	S1=None
		S2=None



Pattern: 380

Round

4/18/2016

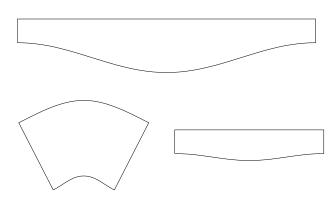


Dims	Options	Conn's
A=Left Diameter	Seam Position=0.000	C1=None
B=Right Diameter	Left Diameter Type=Nominal	C2=None
C=Length	Right Diameter Type=Nominal	C3=None
D=Offset	Cross Break=1	
E=Left Extension	Marker Type=Notch	
F=Right Extension	Seam Position=Angled	
G=Left Collar		
H=Right Collar		

Seams S1=None

Damper:

Damper: None None



51

Round

Dims Options Conn's

A=Diameter B=Length Diameter Type=Nominal Stitch Gap=0.000
Number Of Stitches=4



Seams

S1=None

Damper:

Pattern: 383

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Branch Diameter Type=Nominal	C2=None
C=Left Extension	Branch Diameter Type=Nominal	C3=None
D=Branch Diameter	Hole Adjust=0.000	
E=Branch Length	Round Allowance To Pipe=0.000	
F=Angle	Flat Allowance To Pipe=0.000	
G=Collar	Seam Position=0.000	
	Pipe Parts=1	
	Branch Parts=2	
	Connector Fold Notch=Full Allowance	
	Inlet=1	Seams
	Outlet=2	S1=None
		S2=None



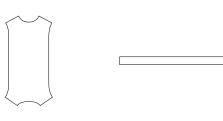


Damper:

4/18/2016 courtesy of software 52

Round





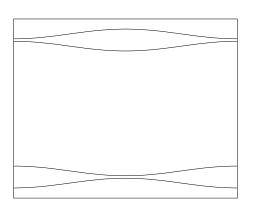
Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Branch Diameter Type=Nominal	C2=None
C=Left Extension	Branch Diameter Type=Nominal	C3=None
D=Branch Diameter	Hole Adjust=0.000	
E=Branch Length	Round Allowance To Pipe=0.000	
F=Angle	Flat Allowance To Pipe=0.000	
G=Collar	Seam Position=0.000	
	Pipe Parts=1	
	Branch Parts=2	
	Connector Fold Notch=Full Allowance	
	Inlet=1	Seams
	Outlet=2	S1=None
		S2=None

Damper:

Pattern: 386

Round





Dims	Options	Conn's
A=Diameter	Seam Position=0.000	C1=None
B=Length	Single Segments=No	C2=None
C=Offset	Diameter Type=Nominal	C3=None
D=Left Collar	Cross Break=1	
E=Right Collar	Marker Type=Notch	
F=Inner Radius	Seam Position=Angled	
	Stitch Gap=0.000	
	Number Of Stitches=4	
	Seam Cuts=Straight	

Damper: None None

S1=None

courtesy of Applied Software

Round



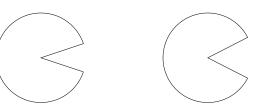
Dims	Options	Conn's
Left Diameter	Left Diameter Type=Nominal	C1=None
Right Diameter	Right Diameter Type=Nominal	C2=None
Pipe Length	Branch Diameter Type=Nominal	C3=None
=Y-Offset	Marker Notches=No	
:X-Offset		
Left Collar		
Right Collar		
Branch Diameter		
Branch Length		
Offset		
-Collar		Seams
		S1=None
		S1=Nor

Damper:

Pattern: 388

Round





Dims	Options	Conn's
A=Outer Diameter	Number Of Struts=3	C1=None
B=Length	Allowance To Pipe=25.000	
C=Height	Allowance To Hood=25.000	
D=Pipe Diameter	Hole Diameter=0.000	
E=Pipe Length	Number Of Holes=0	
F=Inner Diameter	Hole Inset=0.000	
G=Inner Length	Strut Hole Width=0.000	
H=Hole Diameter	Strut Hole Length Adjust=0.000	
I=Angle	Insertion Point=Default	
J=Strut Width	Rotation=Default	
		Seams
		S1=None

Damper:

Round





Dims	Options	Conn's
A=Diameter	2 Parts=No	C1=None
B=Length	Vee Notch Angle=20.000	C2=None
C=Slice Depth	Vee Notch Depth (C1)=0.000	C3=None
D=Left Collar	Vee Notch Depth (C2)=0.000	
E=Right Collar	Seam For Weathering=No	
-	Slice Full Length=No	
	Seam Position=Top	
	Notch Corners=No	
	Notch Connectors=No	
	Draw C1=No	
	Draw C2=No	Seams
		S1=None

Damper:

Pattern: 392

Round

4/18/2016



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A=Pipe Diameter	Branch Parts=1	C1=None
B=Branch Diameter #1	First Break=0.000	
C=Branch Length #1	Second Break=0.000	
D=Angle #1	Third Break=0.000	
E=Offset #1	Seam Position=0.000	
F=Extension #1	Pipe Diameter Type=Nominal	
	Branch Diameter Type=Nominal	
	Hole Adjust=0.000	
	Branch Allowance To Pipe=0.000	
	Cut Back Allowance (%)=0.000	
	Use Pipe Seam For Branches=No	Seams
	Plate Border (Length)=Auto	S1=None

Damper: None



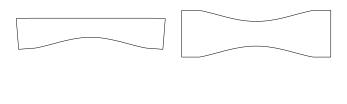
55

Round



Dims	Options	Conn's
A=Diameter	Number Of Segments=4	C1=None
B=Inner Radius	Start Segment=2	C2=None
C=Angle	End Segment=3	C3=None
D=Bottom Extension	Leg Lengths=No	
E=Top Extension	Length Includes Extensions=No	
F=Slice Depth	Seam Position=Top	
G=Slice Angle	2 Parts=No	
	Notch Corners=No	
	Notch Connectors=No	
	Draw C2=No	
	Draw C3=No	Seams
		S1=None

Damper:



Pattern: 394

Round



Options	Conn's
Seam Position=0.000	C1=None
Bottom Diameter Type=Nominal	C2=None
Top Diameter Type=Nominal	
Turnover=0.000	
Splitters=No	
Splitter Adjust=0.000	
2 Parts=No	
Splitters=4	
	Seam Position=0.000 Bottom Diameter Type=Nominal Top Diameter Type=Nominal Turnover=0.000 Splitters=No Splitter Adjust=0.000 2 Parts=No

Seams S1=None

Damper:

Round



Dims	Options	Conn's
A=Left Diameter	Pipe Parts=1	C1=None
B=Right Diameter	Branch Parts=1	C2=None
C=Pipe Length	Seam Position=On Hole	C3=None
D=Y-Offset	Diameter Type BE=Nominal	C4=None
E=Left Collar	Diameter Type SE=Nominal	
F=Right Collar	Branch Diameter Type=Nominal	
G=Branch Diameter	Hole Adjust=0.000	
H=Branch Length	Branch Allowance To Pipe=0.000	
I=Angle	Throat Cut Back (Degrees)=0.000	
J=Inset	Branch Inset=Front	
K=Extension		Seams
L=Collar		S1=None
		S2=None

Damper:

Pattern: 398

Round

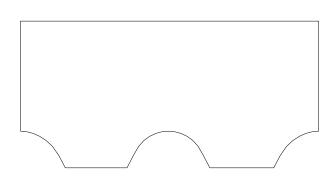


Dims	Options	Conn's
A=Branch Diameter	Seam Position=Right	C1=None
B=Pipe Diameter	Pipe Diameter Type=Nominal	
C=Branch Length	Branch Diameter Type=Nominal	
D=Offset Depth	Flat Allowance To Pipe=0.000	
E=Offset Width	Round Allowance To Pipe=0.000	
	Branch Parts=1	

Seams

S1=None

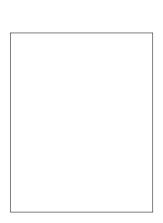
Damper:



courtesy of 4/18/2016 57

Round





Dims	Options	Conn's
A=d	Seam Position=0.000	C1=None
B=l	Diameter Type=Nominal	C2=None
C=Left Extension	Pipe Parts=1	
D=Right Extension	First Break=0.000	
	Second Break=0.000	
	Third Break=0.000	

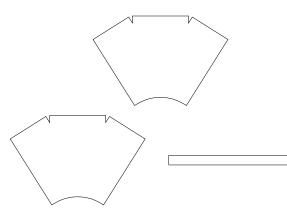
Seams

S1=None

Damper: None None

Pattern: 450 Rectangular/Round

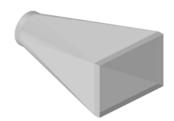


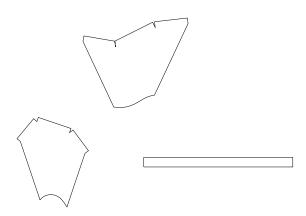


Dims	Options	Conn's
A=a	Cross Break=2	C1=None
B=b	Length Break=1	C2=None
C=d	Diameter Type=Nominal	
D=h	Seam Position=Width	
E=m	Marker Type=Notch	
F=l	Offset Width=Left In	
G=Corner Radius	Offset Depth=Bottom Up	
	Inlet=1	
	Outlet=2	
	Fold Notch Depth=Full Allowance	
	V Notch Rectangular Extension=No	Seams
	Seam Cut Back=None	S1=None
	Cut Back Allowance (%)=50.000	
	2 Parts 90 Degrees Seam=No	

Damper: None

Rectangular/Round





Dims	Options	Conn's
A=a	Cross Break=2	C1=None
B=b	Length Break=1	C2=None
C=d	Diameter Type=Nominal	
D=e	Seam Position=Width	
E=f	Marker Type=Notch	
F=h	Offset Width=Left In	
G=m	Offset Depth=Bottom Up	
H=l	Inlet=1	
I=Corner Radius	Outlet=2	
	Fold Notch Depth=Full Allowance	
	V Notch Rectangular Extension=No	Seams
	Seam Cut Back=None	S1=None
	Cut Back Allowance (%)=50.000	
	2 Parts 90 Degrees Seam=No	

Damper: None

Pattern: 509 Round/Flat Oval/Equipment



Dims	Options	Conn's
A=Diameter	Install Type=Plain	C1=None
B=Length	Sex Type=Male	C2=None
C=Inset	Control Type=None	
D=Sides	Type=Single	
E=Top	Draw Type=None	
F=Bottom	Temperature Type=None	
G=Oval Depth	Draw Type=None	
	Lines=No	
	Cost Supports=No	
	Lines Type=Quantity	
	Lines=3.000	Seams

Damper:

Pattern: 522 Round/Flat Oval/Equipment



Dims	Options	Conn's
A=Diameter	Sex Type=Male	C1=None
B=Collar		C2=None
C=Length		
D=Offset		
E=Oval Depth		

Seams

S1=None

Damper:

Pattern: 523 Round/Equipment



Dims	Options	Conn's
A=Diameter	Number Of Segments=4	C1=None
B=Inner Radius	Diameter Type=Nominal	C2=None
C=Angle	Angle Tolerance=0.000	C3=None
D=Bottom Extension	Mark Sides=No	
E=Top Extension	Leg Lengths=No	
	Fixing Holes On Extension=Yes	
	Square Outer Insulation=No	
	Outer Insulation Extensions=No	
	Develop=No	

Damper: None

S1=None

None

4/18/2016 courtesy of software 60

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Branch Parts=1	C2=None
C=Pipe Length	Seam Position=On Hole	C3=None
D=Y-Offset	Diameter Type BE=Nominal	
E=Left Extension	Diameter Type SE=Nominal	
F=Right Extension	Branch Diameter Type=Nominal	
G=Branch Diameter	Hole Adjust=0.000	
H=Branch Length	Branch Allowance To Pipe=0.000	
I=Angle	Throat Cut Back (Degrees)=0.000	
J=Inset		
K=Extension		Seams
		S1=None
		S2=None

Damper:

Pattern: 530 Round/Flat Oval/Equipment



Dims	Options	Conn's
A=Diameter	Sex Type=Male	C1=None
B=Collar	Extension includes Diameter=No	C2=None
C=Length	Type=None	
D=Offset	Circles=0	
E=Oval Depth	Cost Supports=No	

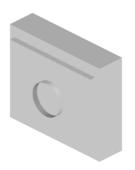
Seams

S1=None

Damper:

courtesy of Applied Software 4/18/2016 61

Pattern: 533 Round/Flat Oval/Equipment



Dims	Options	Conn's
A=Diameter	Install Type=Plain	C1=None
B=Width	Sex Type=Male	C2=None
C=Depth	Control Type=None	
D=Length	Type=Single	
E=Inset	Draw Type=None	
F=Inset	Temperature Type=None	
G=Sides	Draw Type=None	
H=Top	Lines=No	
I=Bottom	Cost Supports=No	
J=Collar	Lines Type=Quantity	
K=Right Collar	Lines=3.000	Seams
L=Oval Depth		

Damper:

Pattern: 555 Round/Flat Oval/Equipment



Dims	Options	Conn's
A=Diameter	Type=Plain	C1=None
B=Collar	Sex Type=Male	C2=None
C=Length	Pattern=Single	
D=Oval Depth	Mirror=No	
	Mirror View=No	
	X-Offset=0.000	
	Y-Offset=0.000	
	Cost Supports=No	

S1=None

Seams

Damper:

Pattern: 556 Round/Flat Oval/Equipment



Dims	Options	Conn's
A=Diameter	Sex Type=Male	C1=None
B=Collar	Draw Type=Plain	C2=None
C=Length	Lines Type=Quantity	
D=Offset	Lines=3.000	
E=Oval Depth		

Seams

S1=None

Damper:

Pattern: 557 Round/Flat Oval/Equipment



Dims	Options	Conn's
A=Diameter	Type=Plain	C1=None
B=Collar	Sex Type=Male	
C=Length	Pattern=Single	
D=Oval Depth	Mirror=No	
	Mirror View=No	
	X-Offset=0.000	
	Y-Offset=0.000	
	Cost Supports=No	

Seams

Damper:

Round



Dims	Options	Conn's
A=Width	Pipe Diameter Type=Nominal	C1=None
B=Branch Width #1	Branch Diameter Type=Nominal	C2=None
C=Branch Depth #1	Outline Only=Yes	C3=None
D=Panel Depth	Show Duct=No	
E=Handle Top Diameter	Handle Points=6	
F=Handle Bottom Diamet	er	
G=Handle Top Length		
H=Handle Bottom Length		
I=Handle Inset		
		Seams
		S1=None
		S2=None

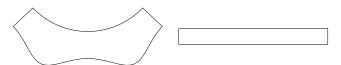
Damper:

Pattern: 751

Round



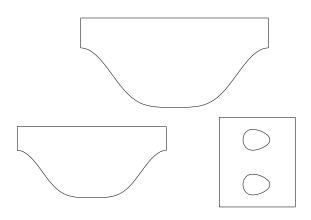
Dims	Options	Conn's
A=Pipe Diameter	Branch Parts=1	C1=None
B=Branch Diameter	Seam Position=0.000	C2=None
C=Branch Length	Pipe Diameter Type=Nominal	C3=None
D=Angle	Branch Diameter Type=Nominal	
E=Collar	Hole Adjust=0.000	
F=Btm Width	Branch Allowance To Pipe=0.000	
	Branch Seam Position=0.000	
	Plate Border=0.000	
	Plate Type=Rectangular	
	Input=Angle	
	Plate Border (Width)=Auto	Seams
	Reducer Parts=1	S1=None
		S2=None
		Damper: None
		None
		None



4/18/2016 courtesy of software 64

Round/Fabrication





Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	C4=None
E=Branch Diameter #1	Third Break=0.000	
F=Branch Length #1	Seam Position=0.000	
G=Angle #1	Pipe Diameter Type=Nominal	
H=Inset #1	Branch Diameter Type=Nominal	
I=Offset #1	Branch Diameter Type=Nominal	
J=Rotation #1	Hole Adjust=0.000	
K=Extension #1	Branch Allowance To Pipe=0.000	Seams
L=Branch Diameter #2	Branch Seam Position=0.000	S1=None
M=Branch Length #2	Throat Cut Back (Degrees)=0.000	S2=None
N=Angle #2	Plate Border (Circumference)=0.000	S3=None
O=Inset #2	Plate Type=Rectangular	
P=Offset #2	Cut Back Allowance (%)=0.000	Damper: None
Q=Rotation #2	Use Pipe Seam For Branches=No	None
R=Extension #2	Plate Border (Length)=Auto	None
	End Castle Width =0.000	None
	End Castle Angle=30.000	INUIT

Pattern: 808

Round



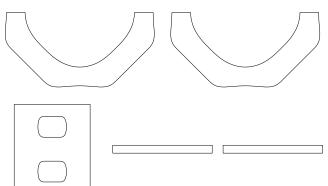
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Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	Pipe Seam Position=0.000	C3=None
D=Right Extension	Branch Seam Position=Throat	C4=None
E=Branch Diameter	Pipe Diameter Type=Nominal	
F=Branch Length	Branch Diameter Type=Nominal	
G=Angle	Branch Diameter Type=Nominal	
H=Inset	Branch Allowance To Pipe=0.000	
I=Offset	Hole Adjust=0.000	
J=Rotation	Straight Notch=No	
K=Collar	Plate Border=0.000	Seams
L=Branch Diameter	Plate Type=Rectangular	S1=None
M=Branch Length	Plate Border (Width)=Auto	S2=None
N=Angle	Inset=Front	S3=None
O=Inset		
P=Offset		Damper: None
Q=Rotation		None None
R=Collar		TOTIC

Round



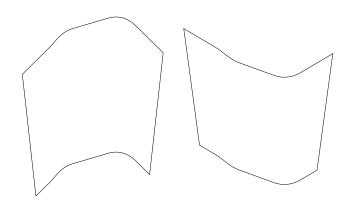


Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	Seam Position=0.000	C3=None
D=Right Extension	Pipe Diameter Type=Nominal	C4=None
E=Branch Diameter	Branch Diameter Type=Nominal	
F=Branch Length	Branch Diameter Type=Nominal	
G=Angle	Branch Allowance To Pipe=0.000	
H=Inset	Hole Adjust=0.000	
I=Offset	Plate Border=0.000	
J=Rotation	Plate Type=Rectangular	
K=Collar	Plate Border (Width)=Auto	Seams
L=Branch Diameter		S1=None
M=Branch Length		S2=None
N=Angle		S3=None
O=Inset		
P=Offset		Damper: None
Q=Rotation		None
R=Collar		None
		None
		None

Pattern: 810 Rectangular/Round



Dims	Options	Conn's
A=Width In	Cross Break=2	C1=None
B=Depth In		C2=None
C=Radius In		
D=Width Out		
E=Depth Out		
F=Radius Out		
G=Length		
H=Angle In		
I=Angle Out		
J=Offset Width		
K=Offset Depth		Seams
L=Extension In		S1=None
M=Extension Out		

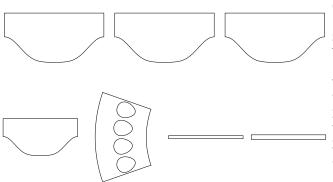


Damper:

courtesy of Applied Software 4/18/2016 66

Round

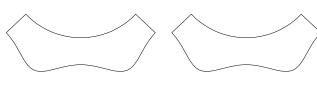




Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Branch Parts=1	C2=None
C=Pipe Length	First Break=0.000	C3=None
D=Left Extension	Second Break=0.000	C4=None
E=Right Extension	Third Break=0.000	C5=None
F=Branch Diameter #1	Seam Position=45.000	C6=None
G=Branch Length #1	Diameter Type BE=Nominal	
H=Angle #1	Diameter Type SE=Nominal	
I=Inset #1	Branch Diameter Type=Nominal	
J=Offset #1	Branch Diameter Type=Nominal	
K=Rotation #1	Branch Diameter Type=Nominal	Seams
L=Extension #1	Branch Diameter Type=Nominal	S1=None
M=Branch Diameter #2	Hole Adjust=0.000	S2=None
N=Branch Length #2	Branch Allowance To Pipe=0.000	S3=None
O=Angle #2	Branch Seam Position=0.000	S4=None
P=Inset #2	Throat Cut Back (Degrees)=0.000	S5=None Damper: None
Q=Offset #2	Cut Back Allowance (%)=0.000	None
R=Rotation #2	End Castle Width =0.000	None
S=Extension #2	End Castle Angle=30.000	None
T=Branch Diameter #3		None
U=Branch Length #3		None
V=Angle #3		None
W=Inset #3		
X=Offset #3		
Y=Rotation #3		
Z=Extension #3		
a=Branch Diameter #4		
b=Branch Length #4		

Pattern: 81	2
Round/Fabrication	



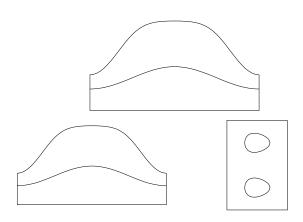




Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	Seam Position=0.000	C3=None
D=Right Extension	Pipe Diameter Type=Nominal	C4=None
E=Branch Diameter	Branch Diameter Type=Nominal	
F=Branch Length	Branch Diameter Type=Nominal	
G=Angle	Hole Adjust=0.000	
H=Inset	Branch Allowance To Pipe=0.000	
I=Rotation	Branch Seam Position=0.000	
J=Collar	Plate Border=0.000	
K=Branch Diameter	Plate Type=Rectangular	Seams
L=Branch Length	Input=Angle	S1=None
M=Angle	Plate Border (Width)=Auto	S2=None
N=Inset	Reducer Parts=1	S3=None
O=Rotation		
P=Collar		Damper: None
Q=Btm Width		None
R=Btm Width		None
		None

Round





Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	C4=None
E=Branch Diameter	Third Break=0.000	C5=None
F=Branch Length	Seam Position=0.000	C6=None
G=Angle	Pipe Diameter Type=Nominal	
H=Inset	Branch Diameter Type=Nominal	
I=Offset	Branch Diameter Type=Nominal	
J=Rotation	Hole Adjust=0.000	
K=Extension	Branch Allowance To Pipe=0.000	Seams
L=Collar	Throat Cut Back (Degrees)=0.000	S1=None
M=Branch Diameter	Reducer Parts=1	S2=None
N=Branch Length	Branch Inset=Front	S3=None
O=Angle		
P=Inset		Damper:
Q=Offset		24
R=Rotation		
S=Extension		
T=Collar		

Pattern: 815

Round





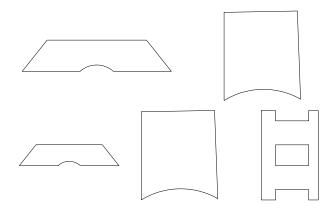


Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Branch Parts=1	C2=None
C=Pipe Length	Pipe Seam Position=270.000	C3=None
D=Left Collar	Branch Seam Position=Throat	C4=None
E=Right Collar	Diameter Type BE=Nominal	
F=Branch Diameter	Diameter Type SE=Nominal	
G=Branch Length	Branch Diameter Type=Nominal	
H=Angle	Branch Diameter Type=Nominal	
I=Inset	Hole Adjust=0.000	
J=Offset	Branch Allowance To Pipe=0.000	
K=Rotation		Seams
L=Collar		S1=None
M=Branch Diameter		S2=None
N=Branch Length		S3=None
O=Angle		
P=Inset		Damper: None
Q=Offset		None
R=Rotation		None
S=Collar		None
		Hone

4/18/2016 courtesy of software 68

Round



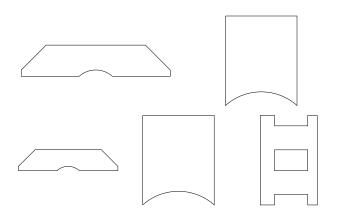


Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Round Allowance To Pipe=0.000	C2=None
C=Left Extension	Flat Allowance To Pipe=0.000	C3=None
D=Right Extension	Pipe Parts=1	C4=None
E=Branch Width #1	Branch Parts=2	
F=Branch Depth #1	First Break=0.000	
G=Branch Length #1	Second Break=0.000	
H=Branch Angle #1	Third Break=0.000	
I=Branch Inset #1	Pipe Seam Position=270.000	
J=Branch Offset #1	Hole Adjust=0.000	
K=Branch Rotation #1	Plate Border=0.000	Seams
L=Branch Extension #1	Castle Width=0.000	S1=None
M=Branch Width #2	Castle Angle=30.000	S2=None
N=Branch Depth #2	Plate Border (Width)=Auto	S3=None
O=Branch Length #2		
P=Branch Angle #2		Damper: None
Q=Branch Inset #2		None
R=Branch Offset #2		None
S=Branch Rotation #2		None
T=Branch Extension #2		INUITE

Pattern: 818

Round





Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Round Allowance To Pipe=0.000	C2=None
C=Left Extension	Flat Allowance To Pipe=0.000	C3=None
D=Right Extension	Pipe Parts=1	C4=None
E=Branch Width #1	Branch Parts=2	C5=None
F=Branch Depth #1	First Break=0.000	
G=Branch Length #1	Second Break=0.000	
H=Branch Angle #1	Third Break=0.000	
I=Branch Inset #1	Pipe Seam Position=270.000	
J=Branch Offset #1	Hole Adjust=0.000	
K=Branch Rotation #1	Plate Border=0.000	Seams
L=Branch Extension #1	Throat Clearance=0.000	S1=None
M=Branch Width #2	Castle Width=0.000	S2=None
N=Branch Depth #2	Castle Angle=30.000	S3=None
O=Branch Length #2	Plate Border (Width)=Auto	
P=Branch Angle #2	Length Includes Throat Clearance=No	Damper: None
Q=Branch Inset #2		None
R=Branch Offset #2		None
S=Branch Rotation #2		None
T=Branch Extension #2		Home
U=Reducer Diameter		
V=Reducer Length		

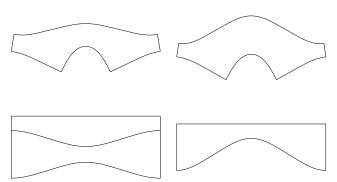
4/18/2016 courtesy of software 69

Round/Flat Oval



Dims	Options	Conn's
A=Btm Width	Bottom Diameter Type=Nominal	C1=None
B=Btm Depth	Top Diameter Type=Nominal	C2=None
C=Right Width	Right Diameter Type=Nominal	C3=None
D=Right Depth	Left Diameter Type=Nominal	C4=None
E=Left Width	Number Of Segments=2	C5=None
F=Left Depth	Number Of Segments=1	C6=None
G=Right Height	Single Segments=No	
H=Left Height	Marker Type=Notch	
I=Right Radius		
J=Left Radius		
K=Right Angle		Seams
L=Left Angle		S1=None
M=Bottom Extension		
N=Right Extension		
O=Left Extension		





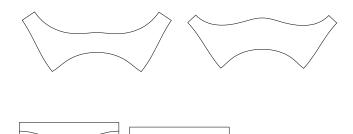
Pattern: 821

Round



Dims	Options	Conn's
A=Bottom Diameter	Bottom Diameter Type=Nominal	C1=None
B=Right Diameter	Right Diameter Type=Nominal	C2=None
C=Left Diameter	Left Diameter Type=Nominal	C3=None
D=Right Radius	Number Of Segments=2	C4=None
E=Left Radius	Number Of Segments=1	C5=None
F=Right Angle	Single Segments=No	C6=None
G=Left Angle	Marker Type=Notch	
H=Bottom Extension		
I=Right Extension		
J=Left Extension		
		Seams
		S1=None





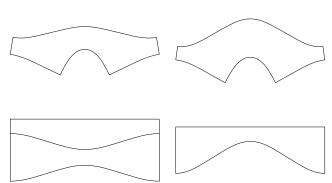
courtesy of Applied Software 4/18/2016 70

Round/Flat Oval



Dims	Options	Conn's
A=Btm Width	Bottom Diameter Type=Nominal	C1=None
B=Btm Depth	Top Diameter Type=Nominal	C2=None
C=Right Width	Right Diameter Type=Nominal	C3=None
D=Right Depth	Left Diameter Type=Nominal	C4=None
E=Left Width	Number Of Segments=2	C5=None
F=Left Depth	Number Of Segments=1	C6=None
G=Right Height	Single Segments=No	
H=Left Height	Marker Type=Notch	
I=Right Radius		
J=Left Radius		
K=Right Angle		Seams
L=Left Angle		S1=None
M=Bottom Extension		
N=Right Extension		
O=Left Extension		

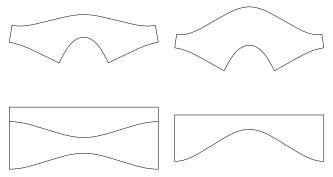




Pattern: 823
Round/Flat Oval



Dims	Options	Conn's
A=Btm Width	Bottom Diameter Type=Nominal	C1=None
B=Btm Depth	Top Diameter Type=Nominal	C2=None
C=Right Width	Right Diameter Type=Nominal	C3=None
D=Right Depth	Left Diameter Type=Nominal	C4=None
E=Left Width	Number Of Segments=2	C5=None
F=Left Depth	Number Of Segments=1	C6=None
G=Right Height	Single Segments=No	
H=Left Height	Marker Type=Notch	
I=Right Radius		
J=Left Radius		
K=Right Angle		Seams
L=Left Angle		S1=None
M=Bottom Extension		
N=Right Extension		
O=Left Extension		
		Damper:



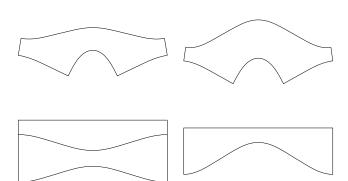
4/18/2016 courtesy of software. 71

Round/Flat Oval



Dims	Options	Conn's
A=Btm Width	Bottom Diameter Type=Nominal	C1=None
B=Btm Depth	Top Diameter Type=Nominal	C2=None
C=Right Width	Right Diameter Type=Nominal	C3=None
D=Right Depth	Left Diameter Type=Nominal	C4=None
E=Left Width	Number Of Segments=2	C5=None
F=Left Depth	Number Of Segments=1	C6=None
G=Right Radius	Single Segments=No	
H=Left Radius	Marker Type=Notch	
I=Right Angle		
J=Left Angle		
K=Bottom Extension		Seams
L=Right Extension		S1=None
M=Left Extension		



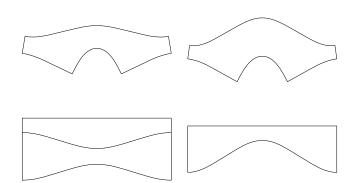


Pattern: 825 Round/Flat Oval



Dims	Options	Conn's
A=Btm Width	Bottom Diameter Type=Nominal	C1=None
B=Btm Depth	Right Diameter Type=Nominal	C2=None
C=Right Width	Left Diameter Type=Nominal	C3=None
D=Right Depth	Number Of Segments=2	C4=None
E=Left Width	Number Of Segments=1	C5=None
F=Left Depth	Single Segments=No	C6=None
G=Right Radius	Marker Type=Notch	
H=Left Radius		
I=Right Angle		
J=Left Angle		
K=Bottom Extension		Seams
L=Right Extension		S1=None
M=Left Extension		

Damper:



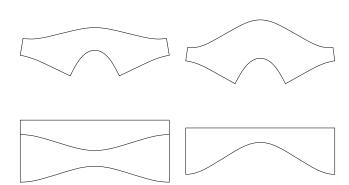
courtesy of Applied Software 4/18/2016 72

Round/Flat Oval



Dims	Options	Conn's
A=Btm Width	Bottom Diameter Type=Nominal	C1=None
B=Btm Depth	Top Diameter Type=Nominal	C2=None
C=Right Width	Right Diameter Type=Nominal	C3=None
D=Right Depth	Left Diameter Type=Nominal	C4=None
E=Left Width	Number Of Segments=2	C5=None
F=Left Depth	Number Of Segments=1	C6=None
G=Right Height	Single Segments=No	
H=Right Radius	Marker Type=Notch	
I=Left Radius		
J=Right Angle		
K=Left Angle		Seams
L=Bottom Extension		S1=None
M=Right Extension		
N=Left Extension		





Pattern: 827
Round/Flat Oval

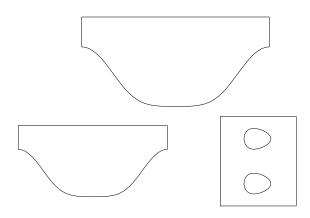


Dims	Options	Conn's
A=Btm Width	Bottom Diameter Type=Nominal	C1=None
B=Btm Depth	Top Diameter Type=Nominal	C2=None
C=Right Width	Right Diameter Type=Nominal	C3=None
D=Right Depth	Left Diameter Type=Nominal	C4=None
E=Left Width	Number Of Segments=2	C5=None
F=Left Depth	Number Of Segments=1	C6=None
G=Right Height	Single Segments=No	
H=Left Height	Marker Type=Notch	
I=Right Radius		
J=Left Radius		
K=Right Angle		Seams
L=Left Angle		S1=None
M=Bottom Extension		
N=Right Extension		
O=Left Extension		
		Damper:

4/18/2016 courtesy of Applied software 73

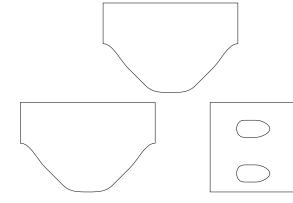
Round





Pattern: 831
Round/Flat Oval





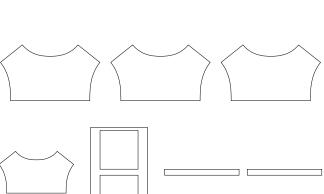
Dims	Options Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	
E=Branch Diameter #1	Third Break=0.000	
F=Branch Length #1	Seam Position=0.000	
G=Angle #1	Pipe Diameter Type=Nominal	
H=Inset #1	Branch Diameter Type=Nominal	
I=Offset #1	Hole Adjust=0.000	
J=Rotation #1	Branch Allowance To Pipe=0.000	
K=Extension #1	Branch Seam Position=0.000	Seams
L=Branch Diameter #2	Throat Cut Back (Degrees)=0.000	S1=None
M=Branch Length #2	Plate Border (Circumference)=0.000	S2=None
N=Angle #2	Plate Type=Rectangular	
O=Inset #2	Cut Back Allowance (%)=0.000	
P=Offset #2	Use Pipe Seam For Branches=No	Damper: None
Q=Rotation #2	Plate Border (Length)=Auto	None
R=Extension #2	End Castle Width =0.000	None
S=Branch Diameter #3	End Castle Angle=30.000	None
T=Branch Length #3		
U=Angle #3		
V=Inset #3		
W=Offset #3		
X=Rotation #3		
Y=Extension #3		
Z=Branch Diameter #4		
a=Branch Length #4		
b=Angle #4		
•		

Dims	Options	Conn's
A=Width	Pipe Parts=1	C1=None
B=Depth	Branch Parts=1	C2=None
C=Length	Pipe Diameter Type=Nominal	C3=None
D=Left Extension	Branch Diameter Type=Nominal	C4=None
E=Right Extension	Seam Position=0.000	
F=Branch Width #1	Branch Allowance To Pipe=0.000	
G=Branch Depth #1	True Oval Straight=No	
H=Branch Length #1		
I=Angle #1		
J=Inset #1		_
K=Offset #1		Seams
L=(Hole) Rotation #1		S1=None
M=Extension #1		S2=None
N=Branch Width #2		S3=None
O=Branch Depth #2		
P=Branch Length #2		Damper:
Q=Angle #2		'
R=Inset #2		
S=Offset #2		
T=Rotation #2		
U=Extension #2		

4/18/2016 courtesy of Applied software. 74

Round



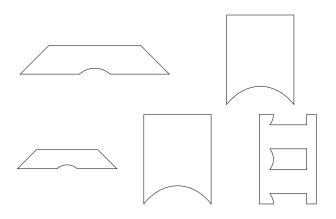


Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Branch Diameter Type=Nominal	C2=None
C=Left Extension	Branch Diameter Type=Nominal	C3=None
D=Right Extension	Hole Adjust=0.000	
E=Branch Diameter	Round Allowance To Pipe=0.000	
F=Branch Length	Flat Allowance To Pipe=0.000	
G=Angle	Seam Position=0.000	
H=Angle	Pipe Parts=1	
I=Inset	Branch Parts=2	
J=Offset	Branch Seam Position=Sides	
K=Collar	Flat Right=No	Seams
L=Branch Diameter	Inlet=1	S1=None
M=Branch Length	Outlet=2	S2=None
N=Angle		
O=Angle		
P=Inset		_
Q=Offset		Damper:
R=Collar		
ii Collul		

Pattern: 837

Round





Dims A=Pipe Diameter	Options Pipe Diameter Type=Nominal	Conn's
B=Pipe Length	Round Allowance To Pipe=0.000	C2=None
C=Left Extension	Flat Allowance To Pipe=0.000	C3=None
D=Right Extension	Pipe Parts=1	C4=None
F=Branch Width #1	Branch Parts=2	0
F=Branch Depth #1	First Break=0.000	
G=Branch Length #1	Second Break=0.000	
H=Branch Angle #1	Third Break=0.000	
I=Branch Inset #1	Pipe Seam Position=270.000	
J=Branch Offset #1	Hole Adjust=0.000	
K=Branch Rotation #1	Plate Border=0.000	Seams
L=Branch Extension #1	Castle Width=0.000	S1=None
M=Branch Width #2	Castle Angle=30.000	S2=None
N=Branch Depth #2	Plate Border (Width)=Auto	S3=None
O=Branch Length #2		
P=Branch Angle #2		Damper: None
Q=Branch Inset #2		None
R=Branch Offset #2		None
S=Branch Rotation #2		None
T=Branch Extension #2		None

4/18/2016 courtesy of Applied software 75

Round/Standard/Equipment



Dims	Ontions	Conn's
	Options Type-Prefiled Pears	C1=None
A=Diameter	Type=Profiled Bearer	
B=Bearer Extn	Profile=Round	C2=None
C=Left Angle	Pipework=No	C3=None
D=Right Angle	Number Of Round Sections=Auto	
E=Rod Extn Above	Drop Rod Diameter=0.400	
F=Rod Extn Below	Bearer Width=2.000	
G=Length A	Bearer Thickness=0.400	
H=Length B	Oversized Item=No	
I=Supported Width	Area of Influence=0.000	
J=Supported Depth	Export=All	
K=Right Rod Offset	Front Seismic Rod=No	Seams
L=Left Rod Offset	Back Seismic Rod=No	
M=Centre Offset	Left Seismic Rod=No	
	Right Seismic Rod=No	
	Front Seismic Rod=No	
	Back Seismic Rod=No	Dampore
	Left Seismic Rod=No	Damper:
	Right Seismic Rod=No	
	Add Rod Size=No	
	A of I: Filled Circle=No	
	A of I: Circle Thickness=0.100	
	Use Support Settings=No	
	Point Load A=0.000	
	Point Load B=0.000	
	Stretch Rods Separately=No	
	oti ctori modo ocparatery-mo	

Pattern: 839

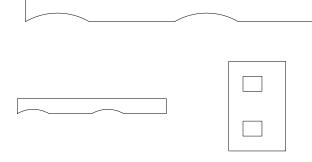
Round



A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Round Allowance To Pipe=0.000	C2=None
C=Left Extension	Flat Allowance To Pipe=0.000	C3=None
D=Right Extension	Pipe Parts=1	C4=None
E=Branch Width	Branch Parts=1	C5=None
F=Branch Depth	Pipe Seam Position=0.000	
G=Branch Length	Hole Adjust=0.000	
H=Inset	Plate Border=0.000	
I=Offset	Castle Width=0.000	
J=Rotation	Castle Angle=30.000	
K=Branch Width	Plate Border (Width)=Auto	Seams
L=Branch Depth		S1=None
M=Branch Length		S2=None
N=Inset		
O=Offset		
P=Rotation		Damper:
Q=Reducer Diameter		2 apo
R=Reducer Length		

Options

Conn's

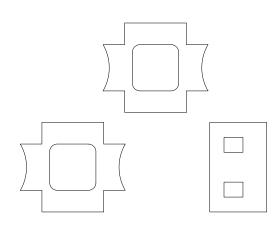


4/18/2016 courtesy of Applied software 76

Dims

Round

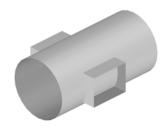




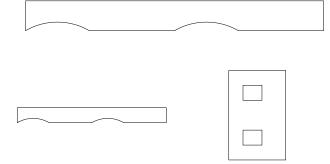
C=Left Extension Flat Allowance To Pipe=0.000 D=Right Extension Pipe Parts=1 E=Branch Width Pipe Seam Position=0.000 F=Branch Depth Hole Adjust=0.000 G=Branch Length Plate Border=0.000 H=Inset Castle Width=0.000 I=Rotation Castle Angle=30.000 J=Hole Width Plate Border (Width)=Auto K=Hole Depth Fold Notch Depth=0.000 L=Hole Radius Develop Branch Collar=No M=Collar N=Branch Width O=Branch Depth	C1=None C2=None C3=None C4=None Seams S1=None S2=None S3=None
C=Left Extension Flat Allowance To Pipe=0.000 D=Right Extension Pipe Parts=1 E=Branch Width Pipe Seam Position=0.000 F=Branch Depth Hole Adjust=0.000 G=Branch Length Plate Border=0.000 H=Inset Castle Width=0.000 I=Rotation Castle Angle=30.000 J=Hole Width Plate Border (Width)=Auto K=Hole Depth Fold Notch Depth=0.000 L=Hole Radius Develop Branch Collar=No M=Collar N=Branch Width O=Branch Depth	C3=None C4=None Seams S1=None S2=None
D=Right Extension Pipe Parts=1 E=Branch Width Pipe Seam Position=0.000 F=Branch Depth Hole Adjust=0.000 G=Branch Length Plate Border=0.000 H=Inset Castle Width=0.000 I=Rotation Castle Angle=30.000 J=Hole Width Plate Border (Width)=Auto K=Hole Depth Fold Notch Depth=0.000 L=Hole Radius Develop Branch Collar=No M=Collar N=Branch Width O=Branch Depth	Seams S1=None S2=None
E=Branch Width Pipe Seam Position=0.000 F=Branch Depth Hole Adjust=0.000 G=Branch Length Plate Border=0.000 H=Inset Castle Width=0.000 I=Rotation Castle Angle=30.000 J=Hole Width Plate Border (Width)=Auto K=Hole Depth Fold Notch Depth=0.000 L=Hole Radius Develop Branch Collar=No M=Collar N=Branch Width O=Branch Depth	Seams S1=None S2=None
F=Branch Depth Hole Adjust=0.000 G=Branch Length Plate Border=0.000 H=Inset Castle Width=0.000 I=Rotation Castle Angle=30.000 J=Hole Width Plate Border (Width)=Auto K=Hole Depth Fold Notch Depth=0.000 L=Hole Radius Develop Branch Collar=No M=Collar N=Branch Width O=Branch Depth	S1=None S2=None
G=Branch Length Plate Border=0.000 H=Inset Castle Width=0.000 I=Rotation Castle Angle=30.000 J=Hole Width Plate Border (Width)=Auto K=Hole Depth Fold Notch Depth=0.000 L=Hole Radius Develop Branch Collar=No M=Collar N=Branch Width O=Branch Depth	S1=None S2=None
H=Inset Castle Width=0.000 I=Rotation Castle Angle=30.000 J=Hole Width Plate Border (Width)=Auto K=Hole Depth Fold Notch Depth=0.000 L=Hole Radius Develop Branch Collar=No M=Collar N=Branch Width O=Branch Depth	S1=None S2=None
I=Rotation Castle Angle=30.000 J=Hole Width Plate Border (Width)=Auto K=Hole Depth Fold Notch Depth=0.000 L=Hole Radius Develop Branch Collar=No M=Collar N=Branch Width O=Branch Depth	S1=None S2=None
J=Hole Width Plate Border (Width)=Auto K=Hole Depth Fold Notch Depth=0.000 L=Hole Radius Develop Branch Collar=No M=Collar N=Branch Width O=Branch Depth	S1=None S2=None
K=Hole Depth Fold Notch Depth=0.000	S1=None S2=None
L=Hole Radius Develop Branch Collar=No M=Collar N=Branch Width O=Branch Depth	S1=None S2=None
M=Collar N=Branch Width O=Branch Depth	S2=None
N=Branch Width O=Branch Depth	
O=Branch Depth	S3=None
•	22
P=Rranch Length	
i -bianch tengan	Damper:
Q=Inset	Damper.
R=Rotation	
S=Hole Width	
T=Hole Depth	
U=Hole Radius	
V=Collar	

Pattern: 841

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Round Allowance To Pipe=0.000	C2=None
C=Left Extension	Flat Allowance To Pipe=0.000	C3=None
D=Right Extension	Pipe Parts=1	C4=None
E=Branch Width	Branch Parts=1	
F=Branch Depth	Pipe Seam Position=0.000	
G=Branch Length	Hole Adjust=0.000	
H=Inset	Plate Border=0.000	
I=Rotation	Castle Width=0.000	
J=Extension	Castle Angle=30.000	
K=Branch Width	Plate Border (Width)=Auto	Seams
L=Branch Depth		S1=None
M=Branch Length		S2=None
N=Inset		
O=Rotation		
P=Extension		Damper:



courtesy of Applied Software 77 4/18/2016

Round

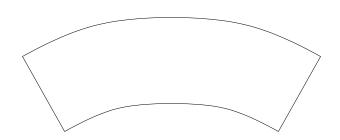


Dims	Options	Conn's
A=Left Width	Cross Break=1	
B=Left Depth	Seam Position=0.000	
C=Right Width		
D=Right Depth		
E=Length		
F=Offset		

Seams

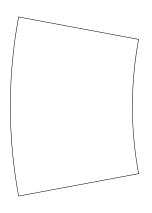
S1=None

Damper:



Pattern: 850 Round/Fabrication





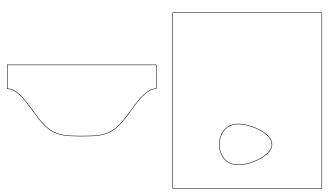
Dims	Options	Conn's
A=Left Diameter	Diameter Type BE=Nominal	C1=None
B=Right Diameter	Diameter Type SE=Nominal	C2=None
C=Pipe Length	Cross Break=1	
D=Left Extension	Seam Position=0.000	
E=Right Extension	Shoe Branch Lengths CLine=Yes	
F=Offset Width	Length Break=1	
G=Offset Depth		

Seams S1=None S2=None

Damper:

Round

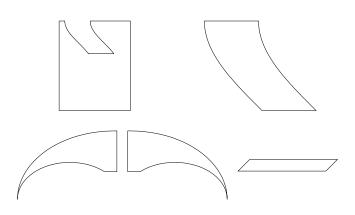




Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	
E=Branch Diameter #1	Third Break=0.000	
F=Branch Length #1	Seam Position=0.000	
G=Angle #1	Pipe Diameter Type=Nominal	
H=Inset #1	Branch Diameter Type=Nominal	
I=Offset #1	Hole Adjust=0.000	
J=Rotation #1	Branch Allowance To Pipe=0.000	
K=Extension #1	Branch Seam Position=0.000	Seams
	Throat Cut Back (Degrees)=0.000	S1=None
	Plate Border (Circumference)=0.000	S2=None
	Plate Type=Rectangular	
	Cut Back Allowance (%)=0.000	
	Use Pipe Seam For Branches=No	Damper: None
	Plate Border (Length)=Auto	None
	End Castle Width =0.000	None
	End Castle Angle=30.000	

Pattern: 852 Rectangular/Round





Dims		Options	Conn's
A=Pipe Diameter	Inlet=1		C1=None
B=Angle	Outlet=2		C2=None
C=Pipe Length			C3=None
D=Inset			
E=Branch Height			
F=Branch Depth			
G=Branch Width			
H=Branch Gauge			
I=Extension			
			Coame

56
S1=None
S2=None
S3=None
S4=None
S5=None Damper:

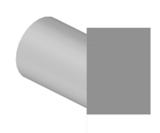
Rectangular/Round/Flat Oval

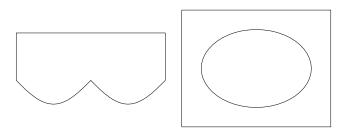


	Dims	Options	Conn's
	A=Btm Width	Bottom Diameter Type=Nominal	C1=None
	B=Btm Depth	Left Diameter Type=Nominal	C2=None
	C=Bottom Radius	Right Diameter Type=Nominal	C3=None
	D=Left Width	Seam Position=Top	C4=None
	E=Left Depth		
	F=Left Radius		
	G=Right Width		
	H=Right Depth		
	I=Right Radius		
	J=Left Angle		
	K=Right Angle		Seams
	L=Height		S1=None
	M=Left Offset		
	N=Right Offset		
	O=Bottom Collar		
	P=Left Collar		Damper:
	Q=Right Collar		24po
	R=Left Offset Depth		
	S=Right Offset Depth		
7			

Pattern: 855

Round





Dims	Options	Conn's
A=Branch Diameter	Seam Position=0.000	
B=Length	Hole Adjust=0.000	
C=Angle	Diameter Type=Nominal	
D=Plate Border	Turnover=0.000	

Seams

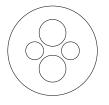
S1=None

Damper:

4/18/2016 courtesy of Applied software. 80

Round





Dims	Options	Conn's
A=Diameter	Diameter Type=Nominal	C1=None
B=Collar	Hole Type=Nominal	C2=None
C=Hole Diameter		C3=None
D=Hole Angle		C4=None
E=Fixing Radius		C5=None
F=Collar		
G=Hole Diameter		
H=Hole Angle		
I=Fixing Radius		
J=Collar		
K=Hole Diameter		Seams
L=Hole Angle		
M=Fixing Radius		
N=Collar		
O=Hole Diameter		
P=Hole Angle		Damper:
Q=Fixing Radius		Damper.
R=Collar		

Pattern: 857

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Centre Radius	Branch Diameter Type=Nominal	
C=Branch Diameter	Branch Parts=2	
D=Branch Length	Branch Allowance To Pipe=0.000	
E=Angle	Branch Seam Position=0.000	
F=Rotation	Rotation=Top	
G=Bend Angle	Branch Type=Round	
H=Inner Radius		

Damper: None

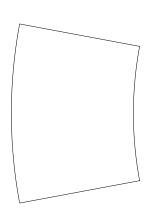
Seams S1=None



4/18/2016 courtesy of software 81

Round





Dims	Options	Conn's
A=Pipe Diameter	Diameter Type BE=Nominal	C1=None
B=Pipe Diameter	Diameter Type SE=Nominal	C2=None
C=Pipe Length	Cross Break=1	
D=Left Extension	Seam Position=0.000	
E=Right Extension	Hole Inset=Along Slope	
	Hole Inset=Hole Centre	

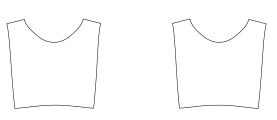
Seams

S1=None

Damper:

Pattern: 863 Round/Fabrication





Dims	Options	Conn's
A=Bottom Diameter	Bottom Diameter Type=Nominal	C1=None
B=Top Diameter	Left Diameter Type=Nominal	C2=None
C=Angle	Right Diameter Type=Nominal	C3=None
D=Centre Length	Seam Position=Top	C4=None
E=Btm Length	Marker Type=Notch	
F=Bottom Collar		
G=Left Collar		
H=Right Collar		

Seams S1=None

Damper:

Round



Dims	Options	Conn's
A=Diameter	Number Of Segments=4	C1=None
B=Inner Radius	Diameter Type=Nominal	C2=None
C=Angle	Type=Normal	C3=None
D=Bottom Extension	Pipe Length=500.000	
E=Top Extension	Cut Length=0.000	
	Cut Length=0.000	
	Cut Length=0.000	

Seams

S1=None

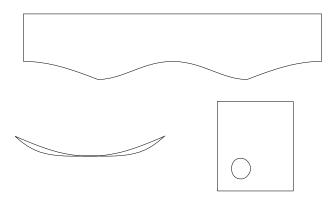
Damper:

Pattern: 867

Round



Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Branch Diameter Type=Nominal	C2=None
C=Left Extension	Pipe Parts=1	C3=None
D=Right Extension	Seam Position=0.000	
E=Branch Diameter	First Break=180.000	
F=Branch Length	Second Break=270.000	
G=Angle	Third Break=90.000	
H=Inset	Branch Parts=1	
I=Extension	Branch Seam Position=180.000	
J=Collar	Hole Adjust=0.000	
	Branch Allowance To Pipe=0.000	Seams
		S1=None
		S2=None
		S3=None



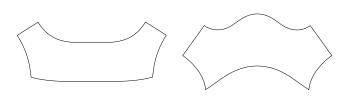
Damper:

Round



Dims	Options	Conn's
x=Bottom Diameter	Bottom Diameter Type=Nominal	C1=None
3=Left Diameter	Left Diameter Type=Nominal	C2=None
C=Right Diameter	Right Diameter Type=Nominal	C3=None
)=Height	Seam Position=Top	C4=None
=Left Offset	Marker Type=Notch	
=Bottom Collar		
G=Left Collar		
H=Right Collar		
=Distance		
=Left Offset Depth		
(=Right Offset Depth		Seams
		S1=None

Damper:



Pattern: 871

Round



Dims	Options	Conn's
A=Pipe Diameter	Branch Parts=1	C1=None
B=Branch Diameter	Branch Seam Position=Throat	C2=None
C=Branch Length	Branch Diameter Type=Nominal	C3=None
D=Angle	Branch Allowance To Pipe=0.000	
E=Offset	Plate Border=0.000	
F=Collar	Plate Type=Rectangular	
	Plate Border (Width)=Auto	
	Inset=Front	

S1=None S2=None

Seams

Damper: None



4/18/2016 courtesy of Applied software 84

Round/Equipment



Dims	Options	Conn's
A=Diameter	Spacing=50.000	C1=None
B=Length	Diameter Ratio=1.100	C2=None
C=Item Centre Line Length	Max Length=0.000	
	Draw as Single Line=No	
	Number Of Round Sections=12	

Seams

Damper:

Pattern: 874

Round



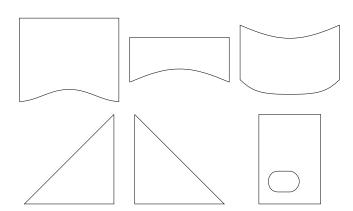
Dims	Options
A=Pipe Diameter	Pipe Diameter Type=Nominal
B=Pipe Length	Branch Diameter Type=Nominal
C=Left Extension	Pipe Parts=1
D=Right Extension	Seam Position=0.000
E=Branch Diameter	First Break=180.000
F=Branch Length	Second Break=270.000
G=Angle	Third Break=90.000
H=Inset	Branch Parts=Yes
I=Extension	Hole Adjust=0.000
J=Collar	Branch Allowance To Pipe=0.000
D=Right Extension E=Branch Diameter F=Branch Length G=Angle H=Inset I=Extension	Seam Position=0.000 First Break=180.000 Second Break=270.000 Third Break=90.000 Branch Parts=Yes Hole Adjust=0.000

Seams
S1=None
S2=None
S3=None
S4=None
Damper:

Conn's

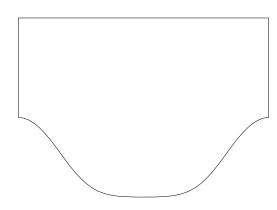
C1=None

C2=None C3=None



Round





Dime	Outions	Camula
Dims	Options	Conn's
A=Pipe Diameter	Branch Parts=1	C1=None
B=Branch Diameter #1	First Break=0.000	C2=None
C=Branch Length #1	Second Break=0.000	C3=None
D=Angle #1	Third Break=0.000	
E=Offset #1	Branch Diameter Type=Nominal	
F=Extension #1	Hole Adjust=0.000	
	Branch Allowance To Pipe=0.000	
	Branch Seam Position=0.000	
	Throat Cut Back (Degrees)=0.000	
	Plate Border (Circumference)=0.000	
	Plate Type=Rectangular	Seams
	Cut Back Allowance (%)=0.000	S1=None
	Use Pipe Seam For Branches=No	S2=None
	Plate Border (Length)=Auto	
	End Castle Width =0.000	
	End Castle Angle=30.000	Dampari Nana
	Draw Plate=No	Damper: None
	Align Damper Holes=No	None
		None

Pattern: 881
Round/Equipment



Dims	Options	Conn's
A=Pipe Diameter	Type=Supply	C1=None
B=Branch Diameter	Angle Tolerance=0.000	C2=None
C=Branch Length	Inlet=2	
D=Angle	Outlet=1	
E=Collar	Number Of Segments=12	

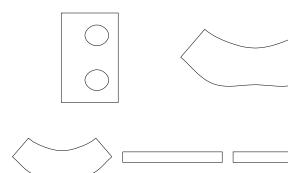
Seams

Damper:

4/18/2016 courtesy of Applied software. 86

Round



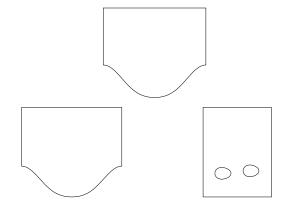


	Dims	Options	Conn's
	A=Pipe Diameter	Pipe Parts=1	C1= C11 C21
	B=Pipe Length	Branch Parts=1	C2= C12 C22
	C=Left Extension	Pipe Seam Position=0.000	C3= C13
	D=Right Extension	First Break=0.000	C4= C14
	E=Branch Diameter #1	Second Break=0.000	C5= C15
	F=Hole Width #1	Third Break=0.000	C6= C16
	G=Hole Depth #1	Pipe Diameter Type=Nominal	C7= C17
	H=Branch Length #1	Branch Diameter Type=Nominal	C8= C18
	I=Angle #1	Hole Adjust=0.000	C9= C19
	J=Inset #1	Branch Allowance To Pipe=0.000	C10 C20
	K=Offset #1	Branch Seam Position=0.000	Seams
	L=Rotation #1	Plate Border=0.000	S1=None
	M=Collar #1	Plate Border (Width)=Equal	S2=None
	N=Hole Offset #1	Plate Type=Rectangular	
	O=Branch Diameter #2	Inlet=1	
	P=Hole Width #2	Outlet=2	Damper:
	Q=Hole Depth #2		Damper.
	R=Branch Length #2		
>	S=Angle #2		
	T=Inset #2		
	U=Offset #2		
	V=Rotation #2		
	W=Collar #2		
	X=Hole Offset #2		
_	Y=Branch Diameter #3		
	Z=Hole Width #3		
	a=Hole Depth #3		
	b=Branch Length #3		

Pattern: 885

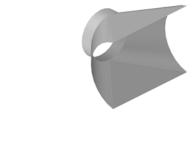
Round

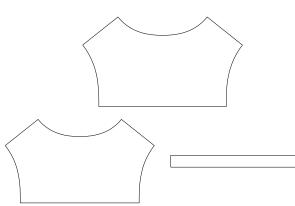




Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	First Break=0.000	C3=None
D=Right Extension	Second Break=0.000	C4=None
E=Branch Diameter	Third Break=0.000	
F=Branch Length	Seam Position=0.000	
G=Angle	Pipe Diameter Type=Nominal	
H=Twist Angle	Branch Diameter Type=Nominal	
I=Inset	Branch Diameter Type=Nominal	
J=Rotation	Hole Adjust=0.000	
K=Extension	Branch Allowance To Pipe=0.000	Seams
L=Branch Diameter	Branch Seam Position=0.000	S1=None
M=Branch Length	Throat Cut Back (Degrees)=0.000	S2=None
N=Angle	Cut Back Allowance (%)=0.000	S3=None
O=Twist Angle	Plate Border=0.000	
P=Inset	Plate Type=Rectangular	Damper: None
Q=Rotation	Plate Border (Width)=Auto	None
R=Extension	Use Pipe Seam For Branches=No	None
		None
		None

Round





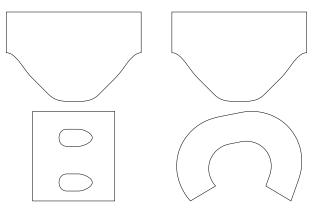
Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Branch Diameter	Branch Diameter Type=Nominal	C2=None
C=Branch Length	Branch Diameter Type=Nominal	C3=None
D=Angle	Hole Adjust=0.000	
E=Angle	Round Allowance To Pipe=0.000	
F=Collar	Flat Allowance To Pipe=0.000	
G=Offset	Seam Position=0.000	
	Branch Parts=2	
	Flat Right=No	

Seams S1=None S2=None

Damper:

Pattern: 889
Round/Flat Oval



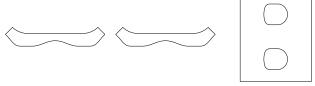


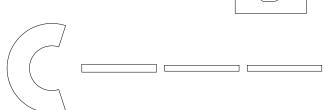
Dims	Options	Conn's
A=Width	Pipe Parts=1	C1=None
B=Depth	Branch Parts=1	C2=None
C=Length	Pipe Diameter Type=Nominal	C3=None
D=Left Extension	Branch Diameter Type=Nominal	C4=None
E=Right Extension	Seam Position=0.000	C5=None
F=Branch Width #1	Right Diameter Type=Nominal	
G=Branch Depth #1	Branch Allowance To Pipe=0.000	
H=Branch Length #1	Reducer Parts=1	
I=Angle #1	True Oval Straight=No	
J=Inset #1		
K=Offset #1		Seams
L=(Hole) Rotation #1		S1=None
M=Extension #1		S2=None
N=Branch Width #2		S3=None
O=Branch Depth #2		
P=Branch Length #2		Damper:
Q=Angle #2		bumper.
R=Inset #2		
S=Offset #2		
T=Rotation #2		
U=Extension #2		
V=Right Width		
W=Right Depth		
X=Right Length		
Y=Offset Width		
Z=Offset Depth		

4/18/2016 courtesy of Applied software 88

Round





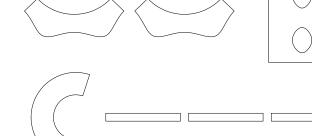


Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Right Diameter	Branch Parts=1	C2=None
C=Pipe Length	Pipe Seam Position=0.000	C3=None
D=Right Length	Branch Seam Position=Throat	C4=None
E=Left Extension	Pipe Diameter Type=Nominal	C5=None
F=Right Extension	Branch Diameter Type=Nominal	
G=Branch Diameter	Branch Diameter Type=Nominal	
H=Branch Length	Branch Allowance To Pipe=0.000	
I=Angle	Hole Adjust=0.000	
J=Inset	Straight Notch=No	
K=Offset	Plate Border=0.000	Seams
L=Rotation	Plate Type=Rectangular	S1=None
M=Collar	Plate Border (Width)=Auto	S2=None
N=Branch Diameter	Right Diameter Type=Nominal	S3=None
O=Branch Length	Inset=Front	
P=Angle	Reducer Parts=1	Damper: None
Q=Inset		None
R=Offset		NOTIC
S=Rotation		
T=Collar		

Pattern: 891

Round



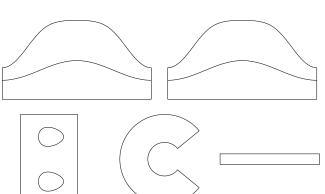


Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Right Diameter	Branch Parts=1	C2=None
C=Pipe Length	Seam Position=0.000	C3=None
D=Right Length	Pipe Diameter Type=Nominal	C4=None
E=Left Extension	Branch Diameter Type=Nominal	C5=None
F=Right Extension	Branch Diameter Type=Nominal	
G=Branch Diameter	Hole Adjust=0.000	
H=Branch Length	Branch Allowance To Pipe=0.000	
I=Angle	Branch Seam Position=0.000	
J=Inset	Plate Border=0.000	
K=Rotation	Plate Type=Rectangular	Seams
L=Collar	Input=Angle	S1=None
M=Branch Diameter	Plate Border (Width)=Auto	S2=None
N=Branch Length	Right Diameter Type=Nominal	S3=None
O=Angle	Reducer Parts=1	S4=None
P=Inset		Damper: None
Q=Rotation		None
R=Collar		None
S=Btm Width		None
T=Btm Width		

4/18/2016 courtesy of Applied software 89

Round



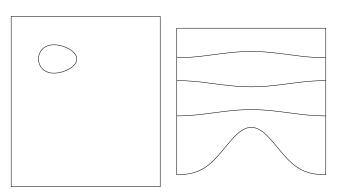


Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Right Diameter	Branch Parts=1	C2=None
C=Pipe Length	First Break=0.000	C3=None
D=Right Length	Second Break=0.000	C4=None
E=Left Extension	Third Break=0.000	C5=None
F=Right Extension	Seam Position=0.000	C6=None
G=Branch Diameter	Pipe Diameter Type=Nominal	C7=None
H=Branch Length	Branch Diameter Type=Nominal	
I=Angle	Branch Diameter Type=Nominal	
J=Inset	Hole Adjust=0.000	
K=Offset	Branch Allowance To Pipe=0.000	Seams
L=Rotation	Throat Cut Back (Degrees)=0.000	S1=None
M=Extension	Right Diameter Type=Nominal	S2=None
N=Collar	Reducer Parts=1	S3=None
O=Branch Diameter	Branch Inset=Front	
P=Branch Length		Damper:
Q=Angle		bamper.
R=Inset		
S=Offset		
T=Rotation		
U=Extension		
V=Collar		

Pattern: 899

Round





Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Pipe Seam Position=180.000	C2=None
C=Left Extension	Pipe Parts=1	C3=None
D=Right Extension	First Break=0.000	C4=None
F=Diameter	Second Break=0.000	C4-NOTIE
	Third Break=0.000	
F=Angle		
G=Inset #1	Branch Diameter Type=Nominal	
H=Height	Branch Seam Position=0.000	
I=Top Extension	Cross Break=1	
	Number Of Segments=4	
	Nest Break Start Segment=0	Seams
	Nest Break End Segment=0	S1=None
	Marker Type=Notch	S2=None
	Hole Adjust=0.000	
	Notch Angle For Seam=0	
	Stitch Gap=0.000	_
	Number Of Stitches=4	Damper:
	Branch Allowance To Pipe=0.000	
	branch Allowance to Pipe-0.000	

4/18/2016 courtesy of Applied 90

Rectangular/Round/Flat Oval/Standard/Equipment

Dims	Options	Conn's
	Inlet=1	
	Outlet=1	
	Pipework=No	
	Show Boundaries=No	

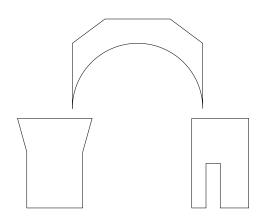
Seams

Damper:

Pattern: 904

Round





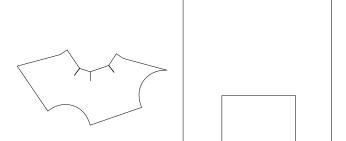
Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Round Allowance To Pipe=0.000	C2=None
C=Left Extension	Flat Allowance To Pipe=0.000	C3=None
D=Right Extension	Pipe Parts=1	
E=Branch Width	Pipe Seam Position=0.000	
F=Branch Depth	Hole Adjust=0.000	
G=Branch Length	Plate Border=0.000	
H=Inset	Castle Width=0.000	
I=Offset	Castle Angle=30.000	
J=Extension	Plate Border (Width)=Auto	
K=Hole Width	Throat Clearance=0.000	Seams
		S1=None
		S2=None

Damper:

Round



Dims	Options	Conn's
A=Diameter	Pipe Parts=1	C1=None
B=Pipe Length	Branch Parts=1	C2=None
C=Left Extension	Pipe Seam Position=0.000	C3=None
D=Right Extension	Pipe Diameter Type=Nominal	
E=Branch Width	Round Allowance To Pipe=0.000	
F=Branch Depth	Flat Allowance To Pipe=0.000	
G=Branch Length	Hole Adjust=0.000	
H=Angle		
I=Angle		
J=Inset		
K=Offset		Seams
L=Rotation		S1=None
M=Extension		S2=None
		S3=None

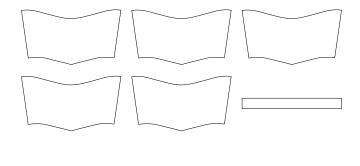


Pattern: 907

Round



Dims	Options	Conn's
A=Bottom Diameter	Bottom Diameter Type=Nominal	C1=None
B=Top Diameter #1	Top Diameter Type=Nominal	C2=None
C=Top Diameter #2	Seam Position=Front	C3=None
D=Top Diameter #3	Cross Break=1	C4=None
E=Top Diameter #4		C5=None
F=Top Diameter #5		C6=None
G=Height		C7=None
H=Length #1		
I=Bottom Collar		
J=Collar		
K=Length #2		Seams
L=Length #3		S1=None
M=Length #4		
N=Length #5		



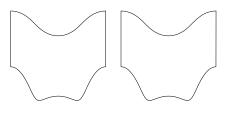
4/18/2016 courtesy of Applied software 92

Damper:

Damper:

Round



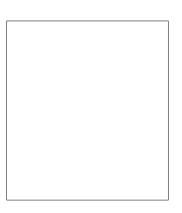




Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Branch Parts=1	C2=None
C=Pipe Length	Pipe Seam Position=270.000	C3=None
D=Left Collar	Branch Seam Position=Throat	C4=None
E=Right Collar	Diameter Type BE=Nominal	
F=Branch Diameter	Diameter Type SE=Nominal	
G=Branch Length	Branch Diameter Type=Nominal	
H=Angle	Branch Diameter Type=Nominal	
=Inset	Hole Adjust=0.000	
=Offset	Branch Allowance To Pipe=0.000	
K=Rotation		Seams
_=Collar		S1=None
M=Branch Diameter		S2=None
N=Branch Length		S3=None
D=Angle		
P=Inset		Damper: None
Q=Offset		None
R=Rotation		None
S=Collar		None
		TTOTIC

Pattern: 911 Round/Flat Oval





Dims	Options	Conn's
A=Pipe Width	Pipe Diameter Type=Nominal	C1=None
B=Pipe Depth	Reducer Diameter Type=Nominal	C2=None
C=Pipe Length	Pipe Parts=1	C3=None
D=Reducer Width	Pipe Seam Position=0.000	
E=Reducer Depth	Offset Width=Left In	
F=Reducer Length	Offset Depth=Bottom Up	
G=Offset Width	Diameter Reduction=0.000	
H=Offset Depth		
I=Left Extension		
J=Right Extension		
_		Seams
		S1=None

Damper:

Round/Equipment



Dims	Options	Conn's
A=Diameter	Inlet=1	
B=Height	Outlet=1	
C=Top Length	Library=Round	
D=Btm Length	Fix Double Wall=No	
	Branches Inset Centrally=No	

Seams

Damper:

Pattern: 913 Rectangular/Round/Equipment

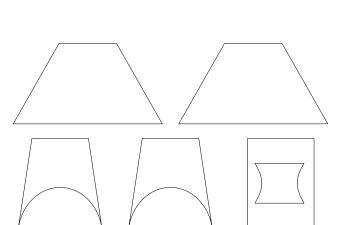


Dims	Options	Conn's
A=Width	Mirror=No	C1=None
B=Depth	Base Depth=Yes	C2=None
C=Length	Cost Supports=No	
D=Height		
E=X Distance		
F=Y Distance		
G=Diameter		
H=Rotation		
I=Base Height		
J=Base Width		
K=Base Depth		Seams
L=Extension		

Damper:

Round





Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Round Allowance To Pipe=0.000	C2=None
C=Left Extension	Flat Allowance To Pipe=0.000	C3=None
D=Right Extension	Hole Adjust=0.000	
E=Branch Width	Pipe Parts=1	
F=Branch Depth	First Break=0.000	
G=Branch Length	Second Break=0.000	
H=Side Angle	Third Break=0.000	
I=Front Angle	Pipe Seam Position=270.000	
J=Inset	Castle Width=0.000	
K=Offset	Castle Angle=30.000	Seams
L=Rotation		S1=None
M=Extension		S2=None

Damper:

Pattern: 922

Round



Dims	Options	Conn's
A=Diameter	Parts To Cut=All	C1=None
B=Inner Diameter		C2=None
C=Y Pitch		C3=None
D=Number Of Segments		
E=Quantity		

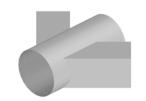
Seams

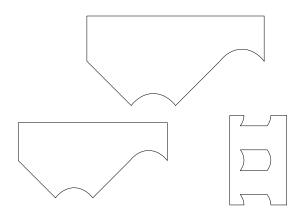
S1=None

Damper:

4/18/2016 courtesy of Applied 95

Round





Pattern: 928
Round/Standard/Equipment

Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
3=Pipe Length	Round Allowance To Pipe=0.000	C2=None
C=Left Extension	Flat Allowance To Pipe=0.000	C3=None
D=Right Extension	Pipe Parts=1	C4=None
=Branch Width #1	Branch Parts=1	
=Branch Depth #1	First Break=0.000	
G=Branch Length #1	Second Break=0.000	
H=Branch Angle #1	Third Break=0.000	
=Branch Inset #1	Pipe Seam Position=270.000	
=Branch Offset #1	Hole Adjust=0.000	
(=Branch Rotation #1	Plate Border=0.000	Seams
=Branch Extension #1	Castle Width=0.000	S1=None
M=Branch Width #2	Castle Angle=30.000	S2=None
N=Branch Depth #2	Plate Border (Width)=Auto	S3=None
D=Branch Length #2		
P=Branch Angle #2		Damper: None
Q=Branch Inset #2		None
R=Branch Offset #2		None
=Branch Rotation #2		None
=Branch Extension #2		None

Dims	Options	Conn's
	Inlet=1	
	Outlet=1	
	Library=Duct	
	Faces=No	

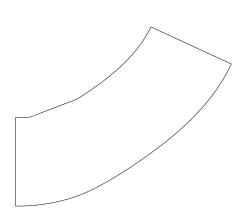
Seams

Damper:

4/18/2016 courtesy of software 96

Round





Dims	Options	Conn's
A=Diameter	Seam Position=0.000	C1=None
B=Diameter	2 Parts=No	C2=None
C=Length	Vee Notch Angle=20.000	
D=Y-Offset	Vee Notch Depth (C1)=0.000	
E=X-Offset	Vee Notch Depth (C2)=0.000	
F=Slice Depth	Seam For Weathering=No	
G=Slice Angle	Slice Left=No	
H=Left Collar	Slice Right=Yes	
I=Right Collar		

Seams S1=None

Damper:

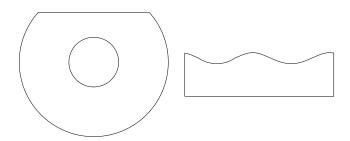
Pattern: 931

Round



Options	Conn's
Branch Seam Position=0.000	C1=None
Branch Parts=1	C2=None
Branch Allowance To Pipe=0.000	
Pipe Seam Position=0.000	
Pipe Parts=None	
Hole Adjust=20.000	
Vee Notch Angle=20.000	
Vee Notch Depth=0.000	
Lid Parts=1	
	Seams
	S1=None
	S2=None
	S3=None
	Branch Seam Position=0.000 Branch Parts=1 Branch Allowance To Pipe=0.000 Pipe Seam Position=0.000 Pipe Parts=None Hole Adjust=20.000 Vee Notch Angle=20.000 Vee Notch Depth=0.000

Damper:



courtesy of 4/18/2016 97

Round







Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
3=Pipe Diameter	Seam Position=0.000	C2=None
C=Pipe Length	Hole Adjust=0.000	C3=None
D=Left Extension	Branch Type=Round	C4=None
=Right Extension	Branch Parts=1	
=Offset Width	Branch Seam Position=0.000	
G=Offset Depth	Branch Allowance To Pipe=0.000	
H=Branch Diameter #1	Branch Type=Round	
=Branch Length #1	Branch Parts=1	
=Angle #1	Branch Seam Position=0.000	
(=Inset #1	Branch Allowance To Pipe=0.000	Seams
=Offset #1	Develop Collars=No	S1=None
√=Extension #1	Develop Branch Collars=No	S2=None
N=Branch Diameter #2		
D=Branch Length #2		
P=Angle #2		Damper: None
Q=Inset #2		None
R=Offset #2		None
S=Extension #2		None
		NOTIE

Pattern: 934

Round



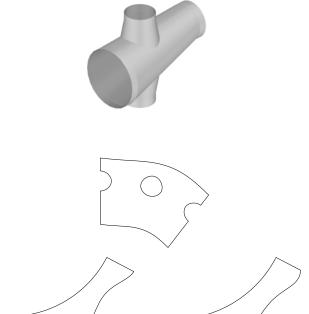




Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Seam Position=0.000	C2=None
C=Pipe Length	Hole Adjust=0.000	C3=None
D=Left Extension	Branch Parts=1	C4=None
E=Right Extension	Branch Seam Position=0.000	
F=Offset Width	Branch Allowance To Pipe=0.000	
G=Offset Depth	Branch Parts=1	
H=Branch Diameter #1	Branch Seam Position=0.000	
I=Branch Length #1	Branch Allowance To Pipe=0.000	
J=Angle #1	Develop Branch Collars=No	
K=Inset #1		Seams
L=Offset #1		S1=None
M=Extension #1		S2=None
N=Branch Diameter #2		
O=Branch Length #2		
P=Angle #2		Damper: None
Q=Inset #2		None None
R=Offset #2		None
S=Extension #2		None
		None

4/18/2016 courtesy of software 98

Round

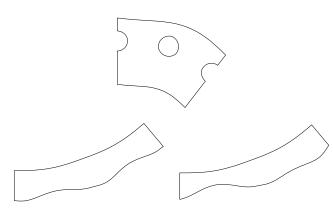


Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Seam Position=0.000	C2=None
C=Pipe Length	Hole Adjust=0.000	C3=None
D=Left Extension	Branch Parts=1	C4=None
E=Right Extension	Branch Seam Position=0.000	
F=Offset Width	Branch Allowance To Pipe=0.000	
G=Offset Depth	Branch Parts=1	
H=Branch Diameter #1	Branch Seam Position=0.000	
I=Branch Length #1	Branch Allowance To Pipe=0.000	
J=Angle #1	Develop Collars=No	
K=Slope Angle #1	Develop Branch Collars=No	Seams
L=Inset #1		S1=None
M=Offset #1		S2=None
N=Extension #1		
O=Branch Rotation #1		
P=Branch Diameter #2		Damper: None
Q=Branch Length #2		None None
R=Angle #2		None
S=Slope Angle #2		None
T=Inset #2		None
U=Offset #2		
V=Extension #2		

Pattern: 936

Round



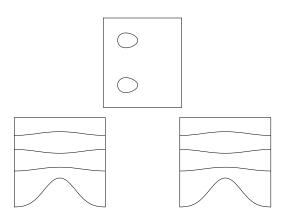


Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Seam Position=0.000	C2=None
C=Pipe Length	Hole Adjust=0.000	C3=None
D=Left Extension	Branch Parts=1	C4=None
E=Right Extension	Branch Seam Position=0.000	
F=Offset Width	Branch Allowance To Pipe=0.000	
G=Offset Depth	Branch Parts=1	
H=Branch Diameter #1	Branch Seam Position=0.000	
I=Branch Length #1	Branch Allowance To Pipe=0.000	
J=Angle #1	Develop Collars=No	
K=Slope Angle #1	Develop Branch Collars=No	Seams
L=Inset #1		S1=None
M=Offset #1		S2=None
N=Extension #1		
O=Branch Diameter #2		
P=Branch Length #2		Damper: None
Q=Angle #2		None
R=Slope Angle #2		None
S=Inset #2		None
T=Offset #2		
U=Extension #2		

4/18/2016 courtesy of software 99

Round





Dims	Options	Conn's
A=Pipe Diameter	Pipe Diameter Type=Nominal	C1=None
B=Pipe Length	Pipe Seam Position=180.000	C2=None
C=Left Extension	Pipe Parts=1	C3=None
D=Right Extension	First Break=0.000	C4=None
E=Branch Diameter #1	Second Break=0.000	C5=None
F=Angle #1	Third Break=0.000	
G=Inset #1	Branch Diameter Type=Nominal	
H=Height #1	Branch Seam Position=0.000	
I=Extension #1	Cross Break=1	
J=Branch Diameter #2	Number Of Segments=4	
K=Angle #2	Nest Break Start Segment=0	Seams
L=Inset #2	Nest Break End Segment=0	S1=None
M=Height #2	Marker Type=Notch	S2=None
N=Extension #2	Hole Adjust=0.000	
	Notch Angle For Seam=0	
	Stitch Gap=0.000	Damper:
	Number Of Stitches=4	2 ap a
	Branch Allowance To Pipe=0.000	

Pattern: 940
Round/Ductboard



Dims	Options	Conn's
A=Diameter	Diameter Type=Nominal	C1=None
B=Length	Number Of Segments=12	C2=None
C=Left Extension	Diameter Adjust=3.000	
D=Right Extension	Half End=No	

Seams

S1=None

Damper: None None

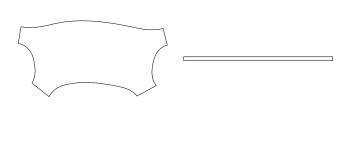
4/18/2016 courtesy of Applied software 100

Round

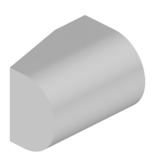


Dims	Options	Conn's
A=Left Diameter	Left Diameter Type=Nominal	C1=None
B=Right Diameter	Right Diameter Type=Nominal	C2=None
C=Pipe Length	Branch Diameter Type=Nominal	C3=None
D=Y-Offset	Marker Notches=No	
E=X-Offset		
F=Left Collar		
G=Right Collar		
H=Branch Diameter		
I=Branch Length		
J=Offset		
K=Collar		Seams
L=Angle		S1=None

Damper:



Pattern: 962
Rectangular/Round

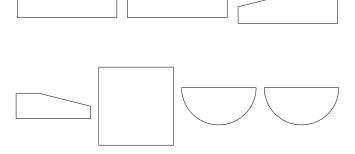


Dims	Options	Conn's
A=Diameter	Vee Depth Male=0.000	C1=None
B=Left Height	Vee Angle Male=30.000	
C=Right Height	Vee Depth Female=0.000	
D=Length	Vee Angle Female=30.000	
E=Right Length	Notch Out=No	
	Use Ends Seam 3=No	
	Split Radius=No	
	Close Middle=No	

S1=None S2=None S3=None

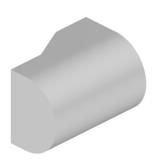
Seams

Damper:



4/18/2016 courtesy of Applied software 101

Rectangular/Round

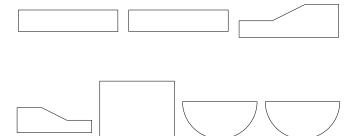


Dims	Options	Conn's
A=Diameter	Vee Depth Male=0.000	C1=None
B=Left Height	Vee Angle Male=30.000	
C=Right Height	Vee Depth Female=0.000	
D=Length	Vee Angle Female=30.000	
E=Left Length	Notch Out=No	
F=Right Length	Use Ends Seam 3=No	
	Split Radius=No	
	Close Middle=No	

Seams

S1=None S2=None S3=None

Damper:



Pattern: 964
Rectangular/Round

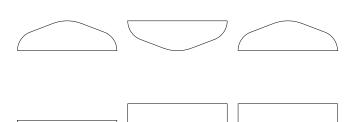


Dims	Options	Conn's
A=Width	Vee Depth Male=0.000	C1=None
B=Depth	Vee Angle Male=30.000	
C=Length	Vee Depth Female=0.000	
D=Left Radius	Vee Angle Female=30.000	
E=Top Radius	Notch Out=No	

Seams

S1=None S2=None

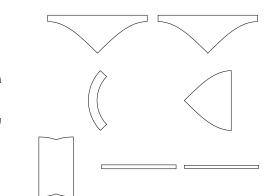
Damper:



courtesy of Applied Software

Round



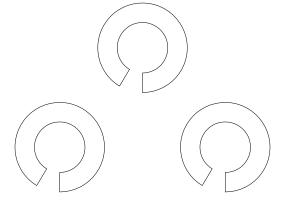


Dims	Options	Conn's
A=Top Diameter	Pipe Parts=2	C1=None
B=Top Extension	Branch Parts=2	C2=None
C=Left Diameter	First Break=0.000	C3=None
D=Left Length	Second Break=0.000	C4=None
E=Left Offset	Third Break=0.000	C5=None
F=Left Inset	Top Diameter Type=Nominal	
G=Left Extension	Left Diameter Type=Nominal	
H=Right Diameter	Right Diameter Type=Nominal	
I=Right Length	Hole Adjust=0.000	
J=Right Offset	Branch Allowance To Pipe=0.000	
K=Right Inset	Branch Seam Position=0.000	Seams
L=Right Extension	Throat Cut Back (Degrees)=0.000	S1=None
M=Left Collar	Cut Back Allowance (%)=0.000	S2=None
N=Right Collar	Inlet=1	S3=None
	Outlet=2	
	End Castle Width =0.000	Damper:
]	End Castle Angle=30.000	Bampen.
	Reducer Parts=2	
	Splitter Adjust=0.000	
	Splitters=Auto	
	Lengths Include Extensions=No	
	Splitters=4	
	Splitter Radius=Auto	

Pattern: 968

Round





Dims	Options	Conn's
A=Diameter	Clockwise=Yes	C1=None
B=Inner Diameter		C2=None
C=Y Pitch		C3=None
D=Height		

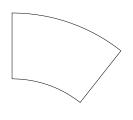
Seams

S1=None

Damper:

Round





Dims	Options	Conn's
A=Pipe Diameter	Pipe Parts=1	C1=None
B=Pipe Diameter	Seam Position=0.000	C2=None
C=Pipe Length	Hole Adjust=0.000	
D=Left Extension	Diameter Type=Nominal	
E=Right Extension	Length Includes Extensions=No	
F=Offset Width	Correct Branch Inset/Length For Angle=No	
G=Offset Depth		

Seams

S1=None

Damper:

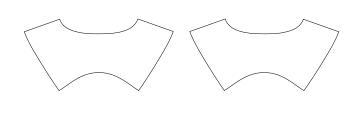
Pattern: 989

Round



Dims	Options	Conn's
A=Bottom Diameter	Bottom Diameter Type=Nominal	C1=None
B=Left Diameter	Left Diameter Type=Nominal	C2=None
C=Right Diameter	Right Diameter Type=Nominal	C3=None
D=Left Angle	Seam Position=Top	C4=None
E=Right Angle	Marker Type=Notch	
F=Left Height		
G=Right Height		
H=Left Offset		
I=Right Offset		
J=Height		
K=Bottom Collar		Seams
L=Left Collar		S1=None
M=Right Collar		

Damper:



courtesy of 4/18/2016 104

Pattern: 995 Round/Flat Oval/Equipment



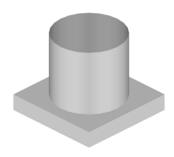
Dims	Options	Conn's
A=Diameter	Sex Type=Male	C1=None
B=Collar		C2=None
C=Length		
D=Offset		
E=Oval Depth		

Seams

S1=None

Damper:

Pattern: 996 Rectangular/Round/Equipment



Dims	Options	Conn's
A=Width	Type=Supply	C1=None
B=Depth	Position From=Edge	C2=None
C=Height	Type=Round	C3=None
D=Diameter	Rotation=0.000	C4=None
E=Collar	Collar=No	C5=None
F=Plate Border (Width)	Arrows/Lines=None	C6=None
G=Plate Border (Depth)	Arrows/Lines Sides=0	C7=None
	Lines/Circles Spacing=1.000 Arrows Direction=Auto Circles=No	C8=None
	Arrows Type=1	Seams
	Diffuser Type=None Cost Supports=No	

Damper:

Round

Dims	Options	Conn's
A=Diameter		C1=None
B=Inner Diameter		C2=None
C=Y Pitch		
D=Number Of Segments		
E=Quantity		

Seams

Damper:

Pattern: 1049

Round



Options	Conn's
Cross Break=1	C1=None
Seam Position=0.000	C2=None
Vertical=No	C3=None
Pipework=No	
Adjust=0.000	
Include=Yes	
Develop X Size For Diameter=No	
Inlet=1	
Outlet=2	
	Cross Break=1 Seam Position=0.000 Vertical=No Pipework=No Adjust=0.000 Include=Yes Develop X Size For Diameter=No Inlet=1

Seams S1=None

Damper:



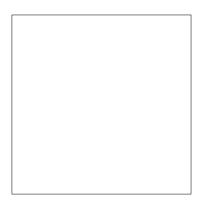
courtesy of 4/18/2016 106

Rectangular/Round/Flat Oval/Standard/Equipment

Dims	Ontions	Conn's
DIIIIS	Options	Conn's
	Inlet=1	
	Outlet=1	
	Pipework=No	
	Show Boundaries=No	
	Faces=No	

Seams

Damper:



Pattern: 1108 Round/Equipment

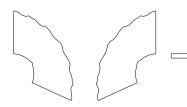


Dims	Options	Conn's
A=Diameter	Bend Radius=4.000	C1=None
B=Length	Factor Type=Multiples Of Diameter	C2=None
C=Lead Length	Max Length=0.000	
	Number Of Round Sections=12	
	Length=Auto	
	Length Adjust=0.000	
	Number Of Segments=Auto	
	Straight Annotation=Up	
	Bend Annotation=Front	
	Allowance=Default	Seams

Damper:

Round





Dims	Options	Conn's
A=Bottom Diameter	Add Collars To Body=No	C1=None
B=Left Diameter	Flat Left=No	C2=None
C=Right Diameter	Notch Angle For Seam=0.000	C3=None
D=Top Diameter #1	Slope Angle=0.000	C4=None
E=Top Diameter #2	Number Of Branches=6	C5=None
F=Top Diameter #3		C6=None
G=Top Diameter #4		C7=None
H=Height		
=Spacing		
I=Left Angle #1		
K=Right Angle #6		Seams
L=Bottom Collar		S1=None
M=Left Collar		S2=None
N=Right Collar		
O=Top Collar #1		
P=Top Collar #2		Damper:
Q=Top Collar #3		Bampen
R=Top Collar #4		

Pattern: 1112

Round

Di	ims	Options	Conn's
A=Diameter	B=Collar	Sex Type=Male	C1=None
C=Length	D=Offset		C2=None



Seams S1=None

01 HONC

Damper:

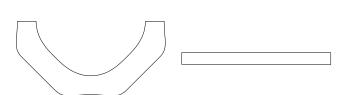
4/18/2016 courtesy of software 108

Round



Dims	Options	Conn's
A=Pipe Diameter	Branch Parts=1	C1=None
B=Branch Diameter	Seam Position=0.000	C2=None
C=Branch Length	Pipe Diameter Type=Nominal	C3=None
D=Angle	Branch Diameter Type=Nominal	
E=Offset	Branch Diameter Type=Nominal	
F=Collar	Branch Allowance To Pipe=0.000	
	Hole Adjust=0.000	
	Plate Border=0.000	
	Plate Type=Rectangular	
	Plate Border (Width)=Auto	
		Seams
		S1=None
		S2=None

Damper: None None None



Pattern: 1141

Round



Dims	Options	Conn's
A=Diameter	Number Of Segments=4	C1=None
B=Inner Radius	Seam Position=0.000	C2=None
C=Angle	Cross Break=1	C3=None
D=Bottom Extension	Diameter Type=Nominal	
E=Top Extension	Notch Angle For Seam=0	
	Marker Type=Notch	
	Diameter Reduction=0.000	
	Marker Depth=Default	
	Mark Sides=No	
	Leg Lengths=No	
	Fixing Holes On Extension=Yes	Seams
	Castle Height=3.000	S1=None
	Castle Width=5.000	
	Castle Quantity=7	
	Castle Angle=75.000	
	Castle Inset=15.000	Damper: None
	Castle Height=3.000	None
	Castle Width=5.000	None
	Castle Quantity=2	
	Castle Angle=75.000	
	Castle Inset=15.000	

4/18/2016 courtesy of Applied software 109

Round/Equipment



Dims	Options	Conn's
A=Diameter	Type=Manual	C1=None
B=Length	Position=0.000	C2=None
C=Left Collar	Plate=No	
D=Right Collar		
E=Total Length		
F=Handle Length #1		
G=Handle Length #2		
H=Handle Inset		

Seams

Damper:

Pattern: 1163

Round



Dims	Options	Conn's
A=Diameter	Number Of Segments=3	C1=None
B=Inner Radius	Seam Position=0.000	C2=None
C=Angle	Cross Break=1	C3=None
D=Bottom Extension	Single Segments=No	
E=Top Extension Angle	Diameter Type=Nominal	
F=Top Extension Length	Automatic Nest Break If Oversize=No	
	Notch Angle For Seam=0	
	Nest Break Start Segment=0	
	Nest Break End Segment=0	
	Marker Type=Notch	
	Diameter Reduction=0.000	Seams
	Marker Depth=Default	S1=None
	Mark Sides=No	S2=None
	Leg Lengths=No	
	Fixing Holes On Extension=Yes	
	Input Top Extension=Top Length	Damner: None
	•	Damper: None None



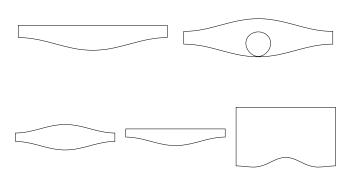


Round



Dims	Options	Conn's
A=Diameter	Number Of Segments=4	C1=None
B=Inner Radius	Seam Position=0.000	C2=None
C=Angle	Pipe Diameter Type=Nominal	C3=None
D=Bottom Extension	Branch Diameter Type=Nominal	C4=None
E=Top Extension	Marker Type=Notch	
F=Branch Diameter	Branch Allowance To Pipe=0.000	
G=Branch Length		
H=Branch Angle		
I=Branch Extension		
J=Branch Inset		
K=Branch Offset		Seams
		S1=None
		S2=None

Damper:



Pattern: 1175 Round/Standard/Equipment

Dims	Options	Conn's
	Inlet=1	
	Outlet=1	
	Library=Duct	
	Faces=No	

Seams

Damper:

Round



Dims	Options	Conn's
A=Pipe Diameter	Branch Parts=1	C1=None
B=Branch Diameter	Pipe Diameter Type=Nominal	C2=None
C=Btm Width	Branch Diameter Type=Nominal	C3=None
D=Btm Depth	Hole Adjust=0.000	
E=Branch Length	Branch Allowance To Pipe=0.000	
F=Collar	Branch Seam Position=0.000	
	Plate Border=0.000	
	Plate Border (Width)=Equal	
	Plate Type=Rectangular	

Seams

S1=None S2=None

Damper: None



Pattern: 1184

Round

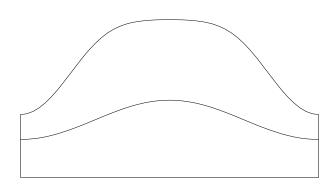


Dims	Options	Conn's
A=Pipe Diameter	Branch Parts=1	C1=None
B=Branch Diameter	Pipe Diameter Type=Nominal	C2=None
C=Branch Length	Branch Diameter Type=Nominal	C3=None
D=Angle	Branch Allowance To Pipe=0.000	C4=None
E=Offset	Throat Cut Back (Degrees)=0.000	
F=Extension		
G=Collar		

Seams

S1=None S2=None

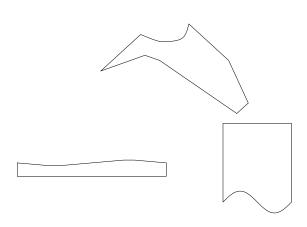
Damper: None



courtesy of 4/18/2016 112

Rectangular/Round



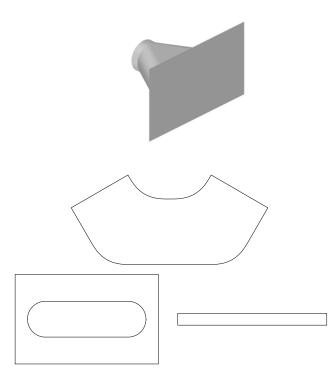


Dims	Options	Conn's
A=Width	Diameter Type=Nominal	C1=None
B=Depth	Round Parts=1	C2=None
C=Diameter	Rect Parts=1	
D=Btm Left Ext	Body Cross Break=1	
E=Btm Right Ext	Body Length Break=1	
F=Top Upper Extension	Seam Position=Width	
G=Top Lower Extension	Marker Type=Notch	
H=Inner Length #1	Inlet=1	
I=Inner Length #2	Outlet=2	
J=Offset Depth		
K=Angle		Seams
		S1=None
		S2=None

Damper:

Pattern: 1199

Round



Dims	Options	Conn's
A=Diameter	Branch Parts=1	C1=None
B=Length	Plate Parts=1	C2=None
C=Extension	Seam Position=0.000	
D=Angle	Hole Adjust=0.000	
E=Plate Width	Diameter Type=Nominal	
F=Plate Depth	Turnover=0.000	
G=Offset Width	Notch Hole Ends=No	
H=Offset Depth		
I=Bottom Width		

Seams S1=None S2=None

Damper: None

courtesy of 4/18/2016 113

Round/Equipment



Options	Conn's
Lines Input=Quantity	C1=None
Horizontal Lines=10	
Vertical Lines=10	
Depth Input=Inside	
	Lines Input=Quantity Horizontal Lines=10 Vertical Lines=10

Seams

Damper:

Pattern: 1239 Round/Standard/Equipment



Dims	Options	Conn's
A=Diameter	Profile=Round	C1=None
B=Bearer Extn	Block Thickness=0.000	C2=None
C=Right Rod Extn Above	Block Length=0.000	C3=None
D=Left Rod Extn Above	Number Of Round Sections=Auto	
E=Rod Extn Below	Drop Rod Diameter=0.400	
F=Length A	Bearer Width=2.000	
G=Length B	Bearer Thickness=0.400	
H=Supported Width	Area of Influence=0.000	
I=Supported Depth	A of I: Filled Circle=No	
J=Right Rod Offset	A of I: Circle Thickness=0.100	
K=Left Rod Offset	Export=All	Seams
L=Centre Offset	Export Rod Size=Yes	
	Use Support Settings=Yes	
	Point Load A=0.000	
	Point Load B=0.000	
	Insulation Shield=No	Damper:

Pattern: 1240
Round/Standard/Equipment



Dims	Options	Conn's
A=Diameter	Block Thickness=0.000	C1=None
B=Rod Extn Above	Block Length=0.000	C2=None
C=Width	Number Of Round Sections=Auto	C3=None
D=Depth	Drop Rod Diameter=0.400	
E=Length	Bearer Width=2.000	
F=Arrow Length	Bearer Thickness=0.400	
G=Arrow Width	Area of Influence=0.000	
H=Arrow Offset	A of I: Filled Circle=No	
I=Arrow Rotation	A of I: Circle Thickness=0.100	
J=Length A	Export=All	
K=Length B	Export Rod Size=Yes	Seams
L=Supported Width	Use Support Settings=Yes	
M=Supported Depth	Point Load A=0.000	
N=Centre Offset	Point Load B=0.000	
	Insulation Shield=No	
		Damper:

Pattern: 1242
Round/Standard/Equipment



Dims	Options	Conn's
A=Diameter	Block Thickness=0.000	C1=None
B=Bearer Extn	Block Length=0.000	C2=None
C=Rod Extn Above	Number Of Round Sections=Auto	C3=None
D=Arrow Length	Drop Rod Diameter=0.400	
E=Arrow Width	Bearer Width=2.000	
F=Arrow Offset	Bearer Thickness=0.400	
G=Arrow Rotation	Area of Influence=0.000	
H=Length A	A of I: Filled Circle=No	
I=Length B	A of I: Circle Thickness=0.100	
J=Supported Width	Export=All	
K=Supported Depth	Export Rod Size=Yes	Seams
L=Centre Offset	Use Support Settings=Yes	
	Point Load A=0.000	
	Point Load B=0.000	
	Insulation Shield=No	
		Dampor:

4/18/2016 courtesy of Applied software 115

Damper:

Round/Standard/Equipment



Dims	Options	Conn's
A=Diameter	Block Thickness=0.000	C1=None
B=Height	Block Length=0.000	C2=None
C=Offset	Number Of Round Sections=Auto	C3=None
D=Top Length	Drop Rod Diameter=0.400	
E=Lap	Bearer Width=2.000	
F=Rod Extn Below	Bearer Thickness=0.400	
G=Rod Extn Above	Hex End=Yes	
H=Length A	Roller Rod Diameter=0.600	
I=Length B	Area of Influence=0.000	
J=Supported Width	A of I: Filled Circle=No	
K=Supported Depth	A of I: Circle Thickness=0.100	Seams
L=Centre Offset	Export=All	
	Export Rod Size=Yes	
	Front Seismic Rod=No	
	Back Seismic Rod=No	
	Left Seismic Rod=No	Damner:
	Right Seismic Rod=No	Damper:
	Use Support Settings=Yes	
	Point Load A=0.000	
	Point Load B=0.000	
	Insulation Shield=No	

Pattern: 1244 Round/Standard/Equipment



Dims	Options	Conn's
A=Diameter	Block Thickness=0.000	C1=None
B=Height	Block Length=0.000	C2=None
C=Offset	Number Of Round Sections=Auto	C3=None
D=Top Length	Drop Rod Diameter=0.400	
E=Lap	Bearer Width=2.000	
F=Rod Extn Below	Bearer Thickness=0.400	
G=Rod Extn Above	Hex End=Yes	
H=Length A	Roller Rod Diameter=0.600	
I=Length B	Area of Influence=0.000	
J=Supported Width	A of I: Filled Circle=No	
K=Supported Depth	A of I: Circle Thickness=0.100	Seams
L=Centre Offset	Export=All	
	Export Rod Size=Yes	
	Front Seismic Rod=No	
	Back Seismic Rod=No	
	Left Seismic Rod=No	Damper:
	Right Seismic Rod=No	
	Use Support Settings=Yes	
	Point Load A=0.000	
	Point Load B=0.000	
	High Detail Roller=No	
	Insulation Shield=No	

Pattern: 1245 Round/Standard/Equipment



Dims	Options	Conn's
A=Diameter	Block Thickness=0.000	C1=None
B=Base Width	Block Length=0.000	C2=None
C=Base Depth	Number Of Round Sections=Auto	C3=None
D=Thickness	Drop Rod Diameter=2.000	
E=Pipe Length	Bearer Width=2.000	
F=Centreline Length	Bearer Thickness=0.400	
G=Gusset Length	Roller Rod Diameter=1.000	
H=Gusset Height	Turnover=0.000	
I=Length A	Export=All	
J=Length B	Export Rod Size=Yes	
K=Supported Width	Use Support Settings=Yes	Seams
L=Supported Depth	Point Load A=0.000	
M=Centre Offset	Point Load B=0.000	
	Insulation Shield=No	

Damper:

Pattern: 1246 Round/Standard/Equipment



Dims	Options	Conn's
A=Diameter	Block Thickness=0.000	C1=None
B=Base Width	Block Length=0.000	C2=None
C=Base Depth	Number Of Round Sections=Auto	C3=None
D=Thickness	Drop Rod Diameter=2.000	
E=Pipe Length	Bearer Width=2.000	
F=Centreline Length	Bearer Thickness=0.400	
G=Gusset Length	Roller Rod Diameter=1.000	
H=Gusset Height	Turnover=0.000	
I=Offset	Export=All	
J=Length A	Export Rod Size=Yes	
K=Length B	Use Support Settings=Yes	Seams
L=Supported Width	Point Load A=0.000	
M=Supported Depth	Point Load B=0.000	
N=Centre Offset	Insulation Shield=No	

Damper:

Round/Standard/Equipment



Dims	Options	Conn's
A=Diameter	Profile=Round	C1=None
B=Bearer Extn	Block Thickness=0.000	C2=None
C=Right Rod Extn Above	Block Length=0.000	C3=None
D=Left Rod Extn Above	Number Of Round Sections=Auto	
E=Rod Extn Below	Drop Rod Diameter=0.400	
F=Length A	Bearer Width=2.000	
G=Length B	Bearer Thickness=0.400	
H=Supported Width	Area of Influence=0.000	
I=Supported Depth	A of I: Filled Circle=No	
J=Right Rod Offset	A of I: Circle Thickness=0.100	
K=Left Rod Offset	Export=All	Seams
L=Centre Offset	Export Rod Size=Yes	
	Use Support Settings=Yes	
	Point Load A=0.000	
	Point Load B=0.000	
	Insulation Shield=No	Damper:

Pattern: 1249 Round/Standard/Equipment



Dims	Options	Conn's
A=Diameter	Block Thickness=0.000	C1=None
B=Height	Block Length=0.000	C2=None
C=Offset	Number Of Round Sections=Auto	C3=None
D=Top Length	Drop Rod Diameter=0.400	
E=Rod Extn Below	Bearer Width=2.000	
F=Rod Extn Above	Bearer Thickness=0.400	
G=Length A	Hex End=Yes	
H=Length B	Area of Influence=0.000	
I=Supported Width	A of I: Filled Circle=No	
J=Supported Depth	A of I: Circle Thickness=0.100	
K=Centre Offset	Export=All	Seams
	Export Rod Size=Yes	
	Front Seismic Rod=No	
	Back Seismic Rod=No	
	Left Seismic Rod=No	
	Right Seismic Rod=No	Damper:
	Use Support Settings=Yes	
	Point Load A=0.000	
	Point Load B=0.000	
	Insulation Shield=No	

Pattern: 1522 Round/Flat Oval/Equipment



Dims	Options	Conn's
A=Diameter	Sex Type=Male	C1=None
B=Collar		C2=None
C=Length		
D=Offset		
E=Oval Depth		

Seams S1=None

Damper: