

STONES SOUND STUDIO

Engineering Note 2

HDS - SPEAKER KITS - Speaker Box Vent (port) table

8/3/2006

MODEL	Speaker	Vent (internal)diameter (mm)	Vent length (mm) #	Pipe order size (mm)	Pipe Mean Outside diameter (mm)
HDS 150	P830891 5"	38	117	40	42.5
HDS 250	P830891 5"	50	98	50	55.8
HDS 255C	P830891 5"	50	98	50	55.8
HDS 455	P830890 6.5"	76	133	80	82.5

Vent Internal Diameter and Length:

The vent internal diameter length and size are mandatory

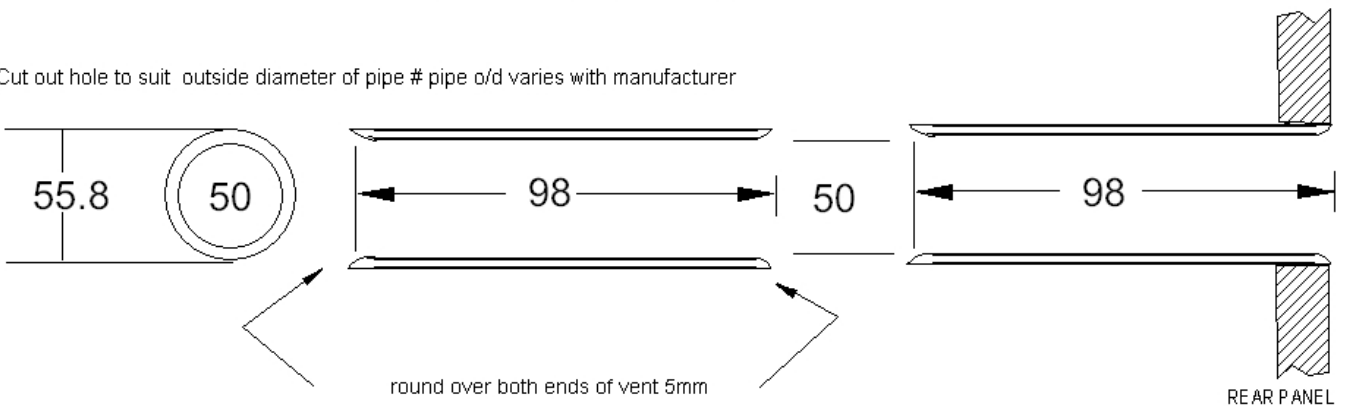
Vent Material:

The vents are made from standard size storm water pipe (DWV) available from Reece Plumbing or Bunning's

Vent Construction

HDS 250/255 VENT DIAGRAM

Cut out hole to suit outside diameter of pipe # pipe o/d varies with manufacturer



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VENT PIPE TABLE - for speaker box (port) vents

by Russell Storey

SPEAKER BOX VENT (PORTS) ROUND

Speaker box vent (ports) can be made from PVC pipe which are available in various diameters and wall thickness

The pipes are normally used in the plumbing trade but make excellent ports (vents) for speaker boxes

The mean outside pipe diameter varies with different manufactures (brands) of pipe

The mean inside pipe diameter varies with different manufactures (brands) of pipe

When cutting the vent pipe hole in the speaker baffle always measure the outside diameter of the pipe first

Use a router or circular saw for hole cut out

Fill the vent with wadding to reduce turbulence and achieve a higher roll of frequency and less bass boom in bad room conditions

DWV (down water vent) has a thicker wall thickness than normal storm water pipe

Use wood glue to secure pipe into the baffle panel to achieve an air tight seal

Can flare the ends of the pipe with heat or house the pipe into the baffle with a router and flare the timber

SPEAKER BOX VENT (PORTS) RECTANGULAR

Area of the rectangular vent is calculated with (Height X Width) of the inside dimensions

Can use wall of the box for the vent sides

When cutting a rectangular vent hole in the speaker baffle allow for the wall thickness usually the thickness of the box material

Use a router or circular saw for hole cut outs

Fill the vent with wadding to reduce turbulence and achieve a higher roll of frequency and less bass boom in bad room conditions



PRODUCT PROPERTIES

Pipe dimension table DWV (down water vent)

Nominal Pipe Dia (mm)	Class	Mean Outside Dia (mm)	Mean wall thickness (mm)	Mean Inside Dia (mm)	Approx. weight per 6 m length (kg)	Approx. weight per 3 m length (kg)
32	SH	36.3	2.1	32	2.0	1.0
40	SH	42.9	2.2	38	3	1.5
50	SH	55.8	2.2	50	4	2
65	SH	68.9	2.9	63	6	3
80	SH	82.5	3.1	76	7	4
100	SN6	110.2	3.0	104	10	5
100	SN10	110.2	3.5	103	12	6
150	SN4	160.3	4.0	152	19	10
150	SN8	160.3	4.8	150	23	12
225	SN4	250.4	6.1	238	44.0	22.0
225	SN8	250.4	7.6	235	54.0	28
300	SN4	315.5	7.7	300	70	35
300	SN8	315.5	9.6	296	87	44
375	SN4	400.5	9.7	381	113	57
375	SN8	400.5	12.1	376	140.0	70.0