

Avionics bay pressure port size calculation

Last update: 8/30/2007

Port_area = Volume of chamber * (Area_ref/Volume_ref)

0.04908739 sq in = Area_ref

100 cu in = Volume_ref

Chamber volume calculations

6 in = height

6 in = dia

170 cu in = calculated volume

Port area calculations

0.0833 sq in = total port area

3 number of ports

0.0278 sq in = area per port

Minimum port diameter calculation

0.1880 in = diameter of each hole

Drill size	Decimal size
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5/32	0.1563
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3/16	0.1875
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7/32	0.2188
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1/4	0.2500 <=== selected size
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9/32	0.2813
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1/4" holes were chosen because they satisfy the above calculation and it's a good size to fit a standard screwdriver through the hole to engage the rotary switch.