

DIAMETER OF HOLE DIVIDED BY HOLE CENTERS (D/C)	ROUND HOLE		SQUARE HOLE	
	60° STAGGERED ROWS % OPEN AREA	STRAIGHT ROWS % OPEN AREA	SIDE OF SQUARE HOLE DIVIDED BY HOLE CENTERS (S/C)	STAGGERED ROWS & STRAIGHT ROWS
0.200	3.6%	3.1%	0.200	4.0%
0.225	4.6%	4.0%	0.225	5.1%
0.250	5.7%	4.9%	0.250	6.3%
0.275	6.9%	5.9%	0.275	7.6%
0.300	8.1%	7.1%	0.300	9.0%
0.325	9.6%	8.3%	0.325	10.6%
0.350	11.1%	9.6%	0.350	12.3%
0.375	12.8%	11.0%	0.375	14.1%
0.400	15.5%	12.6%	0.400	16.0%
0.425	16.4%	14.2%	0.425	18.1%
0.450	18.4%	15.9%	0.450	20.3%
0.475	20.5%	17.7%	0.475	22.6%
0.500	22.7%	19.6%	0.500	25.0%
0.525	25.0%	21.6%	0.525	27.6%
0.550	27.4%	23.8%	0.550	30.3%
0.575	30.0%	26.0%	0.575	33.1%
0.600	32.7%	28.3%	0.600	36.0%
0.625	35.4%	30.7%	0.625	39.1%
0.650	38.3%	33.2%	0.650	42.3%
0.675	41.3%	35.8%	0.675	46.6%
0.700	44.4%	38.5%	0.700	49.0%
0.725	47.7%	41.3%	0.725	52.6%
0.750	51.0%	44.2%	0.750	56.3%
0.775	54.4%	47.2%	0.775	60.0%
0.800	58.0%	50.3%	0.800	64.0%
0.825	61.7%	53.5%	0.825	68.0%
0.850	65.5%	56.7%	0.850	73.3%
0.875	69.5%	60.1%	0.875	76.6%
0.900	73.5%	63.6%	0.900	81.0%
0.925	77.6%	67.2%	0.925	85.6%
0.950	81.9%	70.9%	0.950	90.3%

D - Diameter of Hole

S - Side of Square Hole

C - Hole Centers

Calculating Percentage of Open Area:

Round Hole - 60° Staggerd Rows

$$\frac{D^2 \times 90.69}{C^2}$$

Round Hole - Straight Rows

$$\frac{D^2 \times 78.54}{C^2}$$

Square Hole - Staggered Rows & Straight Rows

$$\frac{S^2 \times 100}{C^2}$$

