

# \*FACTORS FOR CALCULATING SCREEN AREA

**Formula:** Screening Area =  $\frac{U}{A \times B \times C \times D \times E \times F \times G \times H \times J}$

**\*Basic Operating Conditions**

Feed to screening deck contains 25% oversize and 40% halfsize  
 Feed is granular free-flowing material  
 Material weighs 100 lbs. per cu. ft.  
 Operating slope of screen is: Inclined Screen 18° – 20° with flow rotation  
 Horizontal Screen 0°  
 Objective Screening Efficiency – 95%

**FACTOR "A"**

Surface Square Opening	% Open Area	STPH Passing A Sq. Ft.
4"	75%	7.69
3½"	77%	7.03
3"	74%	6.17
2¾"	74%	5.85
2½"	72%	5.52
2"	71%	4.90
1¾"	68%	4.51
1½"	69%	4.20
1¼"	66%	3.89
1"	64%	3.56
¾"	63%	3.38
¾"	61%	3.08
⅝"	59%	2.82
½"	54%	2.47
⅜"	51%	2.08
¼"	46%	1.60
3/16"	45%	1.27
⅛"	40%	.95
3/32"	45%	.76
1/16"	37%	.58
1/32"	41%	.39

**FACTOR "B"**

(Percent of Oversize in Feed Deck)

% Oversize	5	10	15	20	25	30	35
Factor B	1.21	1.13	1.08	1.02	1.00	.96	.92

  

% Oversize	40	45	50	55	60	65	70
Factor B	.88	.84	.79	.75	.70	.66	.62

  

% Oversize	75	80	85	90	95
Factor B	.58	.53	.50	.46	.33

**FACTOR "C"**

(Percent of Halfsize in Feed to Deck)

% Halfsize	0	5	10	15	20	25	30
Factor C	.40	.45	.50	.55	.60	.70	.80

  

% Halfsize	35	40	45	50	55	60	65
Factor C	.90	1.00	1.10	1.20	1.30	1.40	1.55

  

% Halfsize	70	75	80	85	90
Factor C	1.70	1.85	2.00	2.20	2.40

**FACTOR "G"**

(Screen Surface Open Area)

Factor "G" =  $\frac{\% \text{ Open Area of Surface Being Used}}{\% \text{ Open Area Indicated in Capacity}}$

**FACTOR "H"**

(Shape of Surface Opening)

Square	1.00
Short Slot (3 to 4 Times Width)	1.15
Long Slot (More than 4 Times Width)	1.20

**FACTOR "J"**

(Efficiency)

95%	1.00
90%	1.15
85%	1.35
80%	1.50
75%	1.70
70%	1.90

**FACTOR "D"**

(Deck Location)

Deck	Top	Second	Third
Factor D	1.00	.90	.80

**FACTOR "E"**

(Wet Screening)

Opening	1/32"	1/16"	1/8"	3/16"	1/4"	3/8"	1/2"	3/4"	1"
Factor E	1.00	1.25	2.00	2.50	2.00	1.75	1.40	1.30	1.25

**FACTOR "F"**

(Material Weight)

Lbs./cu.ft.	150	125	100	90	80	75	70	60	50	30
Factor F	1.50	1.25	1.00	.90	.80	.75	.70	.60	.50	.30