

FANTAIL BLIND PLATES

Based on ASME B31.3
for Spectacle Blinds, use ASME B16.48 (see assumptions: page 2)

FANTAIL BLANK THICKNESS												
Nominal Size (in)	ANSI 150		ANSI 300		ANSI 400		ANSI 600		ANSI 900		ANSI 1500	
	285 psi Rating		740 psi Rating		985 psi Rating		1480 psi Rating		2220 psi Rating		3705 psi Rating	
	Blank OD (in)	Thickness (in)	Blank OD (in)	Thickness (in)	Blank OD (in)	Thickness (in)	Blank OD (in)	Thickness (in)	Blank OD (in)	Thickness (in)	Blank OD (in)	Thickness (in)
2	4 1/8	3/16	4 3/8	1/4			4 3/8	5/16			5 5/8	7/16
2 1/2	4 7/8	3/16	5 1/8	5/16			5 1/8	3/8			6 1/2	1/2
3	5 3/8	1/4	5 7/8	5/16			5 7/8	7/16	6 5/8	9/16	6 7/8	11/16
4	6 7/8	1/4	7 1/8	7/16	7	7/16	7 5/8	9/16	8 1/8	11/16	8 1/4	13/16
6	8 3/4	3/8	9 7/8	9/16	9 3/4	5/8	10 1/2	13/16	11 3/8	7/8	11 1/8	1 3/16
8	11	1/2	12 1/8	3/4	12	13/16	12 5/8	7/8	14 1/8	1 3/16	13 7/8	1 1/2
10	13 3/8	9/16	14 1/4	7/8	14 1/8	7/8	15 3/4	1 3/16	17 1/8	1 1/2	17 1/8	1 7/8
12	16 1/8	11/16	16 5/8	1 1/16	16 1/2	1 3/16	18	1 7/16				
14	17 3/4	3/4	19 1/8	1 3/16	19	1 5/16	19 3/8	1 9/16				
16	20 1/4	13/16	21 1/4	1 5/16	21 1/8	1 1/2	22 1/4	1 13/16				
18	21 5/8	7/8	23 1/2	1 1/2	23 3/8	1 11/16	24 1/8	2 1/16				
20	22 7/8	7/8	23 3/4	1 5/8	25 1/2	1 7/8	26 7/8	2 1/4				

ASSUMPTIONS

1. Calculation taken from B31.3 Section 304.5.3 for Blanks – $T_m = dg \times \sqrt{(3 \times P / (16 \times S \times E \times W))} + c$

- T_m = Minimum Wall Thickness (calculated and rounded up to nearest 1/16" increment)
- c = Sum of mechanical allowances (thread/groove depth + corrosion and erosion allowances) – assumed 0" in calculations
- dg = Inside diameter of gasket (from ASME B16.20 - Table I-4:
 - Dimensions for Spiral-Wound Gaskets Used with ASME B16.5 Flanges)
- E = Quality Factor (B31.3 Table A-1A or A-1B) - assumed 1 in calculations
- P = Design Gage Pressure (B.16.5 Table II-2-1.1: Pressure - Temperature Ratings for Group 1.1 Materials)
- S = Stress value for material (B 31.3 Table A-1) - see note 2
- W = weld joint strength reduction factor (B31.3 Para. 302.3.5(e)) - assumed 1 in calculations

2. Stress Value: Table calculations based on A516-70 material (23.3 ksi).

3. Blank OD matches gasket outer diameter of centering ring from B16.20 Table I-4 (rounded DOWN to nearest 1/8" increment).