

ASME B16.48 Specification, ASME B16.48 Production Standards, ASME B16.48 Line Blanks, ASME B16.48 Figure-8 Blank, ASME B16.48 Paddle Blank, ASME B16.48 Paddle Spacer,

## 1. ASME B16.48 Specification Definitions

### ASME B16.48 Figure-8 Blank

A figure-8 blank (also called a spectacle blank) is a pressure-retaining plate with one solid end and one open end connected with a web or tie bar.

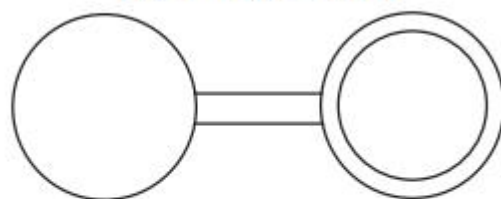
### ASME B16.48 Paddle Blank

A paddle blank is similar to the solid end of a figure-8 blank. It has a plain radial handle. It is generally used in conjunction with a paddle spacer in large sizes.

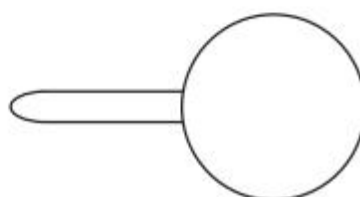
### ASME B16.48 Paddle Spacer

A paddle spacer is similar to the open end of a figure-8 blank. It has a plain radial handle. It is generally used in conjunction with a paddle blank.

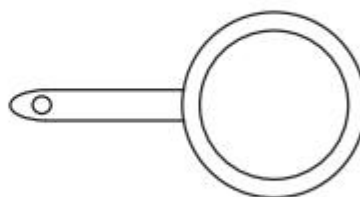
**Fig. 1 Line Blanks**



**(a) Figure-8 Blank**



**(b) Paddle Blank**



**(c) Paddle Spacer**

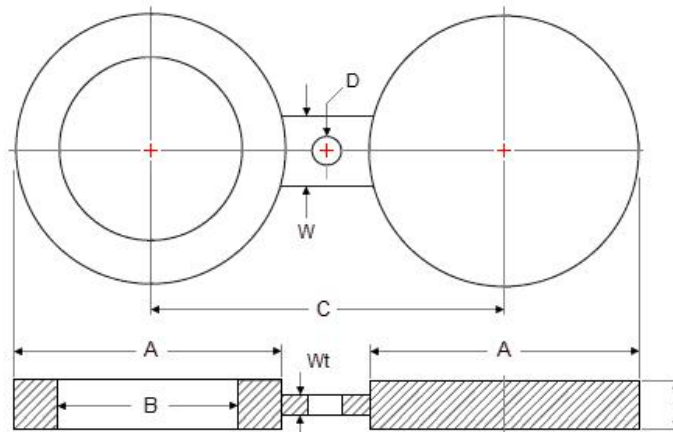
## 2. ASME B16.48 Line Blank Size Requirements

- Nominal Pipe Size (NPS): ASME B16.48 covers line blanks for nominal pipe sizes ranging from NPS 1/2 to NPS 24.

- Pressure Ratings: The **ASME B16.48 standard** provides specifications for line blanks in pressure classes 150, 300, 600, 900, 1500, and 2500.

- Dimensions: The standard specifies the outside diameter (OD), thickness, and bore dimensions for each size and pressure class. These dimensions ensure compatibility with standard flanges and piping systems.

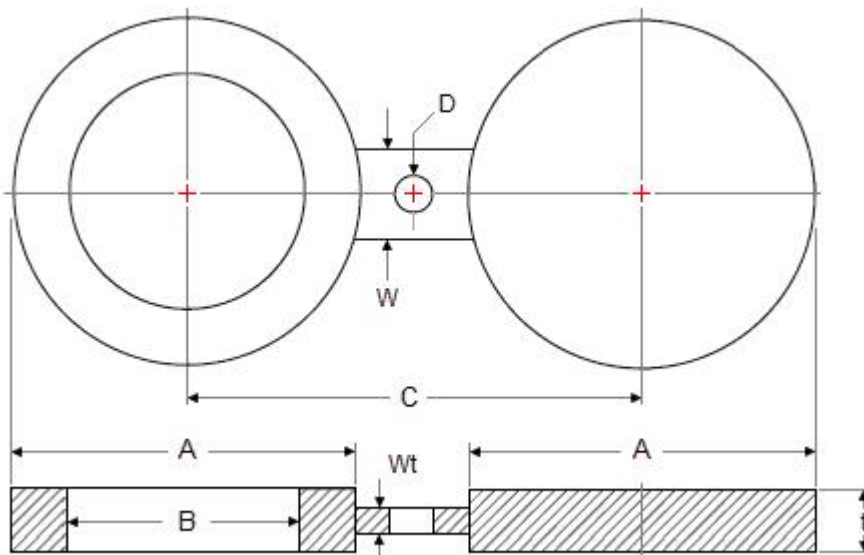
## Dimensions Spectacle Blinds ASME B16.48



### Pressure Class 150

NPS	Outside Ø A	Inside Ø B	Center Line C	THK t	Web Width W
1/2	45	16	60	3	38
3/4	54	21	70	3	38
1	64	27	80	3	38
1.1/4	73	42	90	6.4	38
1.1/2	83	48	100	6.4	38
2	102	61	120	6.4	51
2.1/2	107	73	140	6.4	51
3	133	89	150	6.4	64
3.1/2	159	102	175	9.7	64
4	172	114	190	9.7	64
5	194	141	215	9.7	76

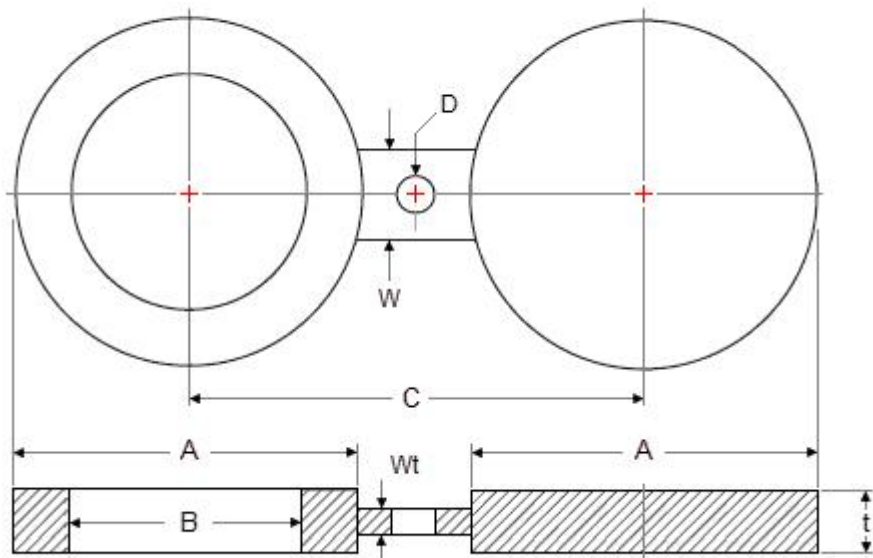
6	219	168	240	12.7	76
8	276	219	300	12.7	76
10	337	273	360	15.7	102
12	406	324	430	19.1	102
14	448	356	475	19.1	108
16	511	406	460	22.4	108
18	546	457	580	25.4	114
20	603	508	635	28.4	121
24	714	610	750	31.8	140



**Pressure Class 300**

NPS	Outside Ø A	Inside Ø B	Center Line C	THK t	Web Width W
1/2	51	16	65	6.4	38
3/4	64	21	80	6.4	38
1	70	27	90	6.4	38
1.1/4	79	42	100	6.4	38
1.1/2	92	48	115	6.4	38
2	108	61	125	9.7	51
2.1/2	127	73	150	9.7	51
3	146	89	170	9.7	64

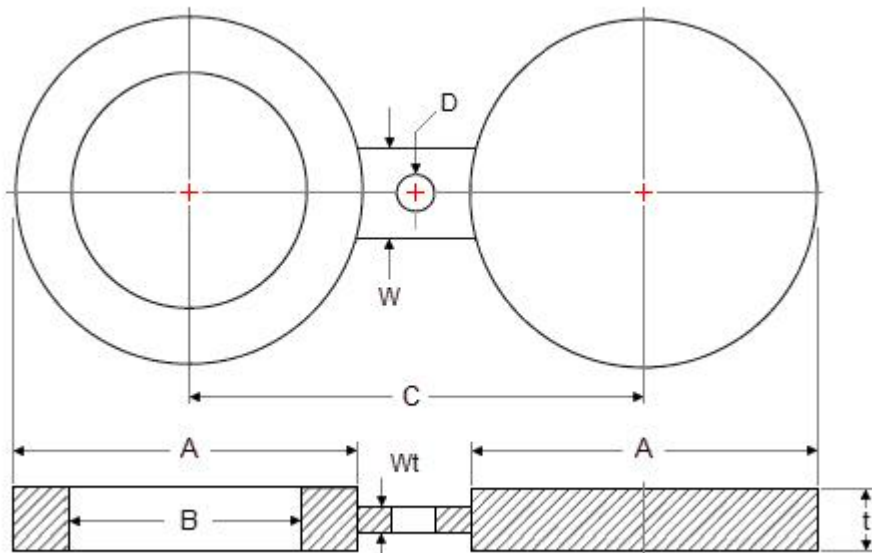
3.1/2	162	102	185	12.7	64
4	178	114	200	12.7	64
5	213	141	235	15.7	76
6	248	168	270	15.7	76
8	305	219	330	22.4	76
10	359	273	385	25.4	102
12	419	324	450	28.4	102
14	483	356	515	31.8	108
16	536	406	570	38.1	108
18	594	457	630	41.1	114
20	651	508	685	44.5	121
24	772	610	810	50.8	140



**Pressure Class 600**

NPS	Outside Ø A	Inside Ø B	Center Line C	THK t	Web Width W
1/2	51	16	65	6.4	38
3/4	64	21	80	6.4	38
1	70	27	90	6.4	57
1.1/4	79	37	100	9.7	57

1.1/2	92	43	115	9.7	67
2	108	55	125	9.7	57
2.1/2	127	67	150	12.7	67
3	146	83	170	12.7	67
3.1/2	159	96	185	15.7	76
4	191	108	215	15.7	76
5	238	135	265	19.1	86
6	264	162	290	22.4	86
8	318	212	350	28.4	95
10	397	265	430	35.1	105
12	454	315	490	41.1	105
14	489	346	525	44.5	114
16	562	397	605	50.8	124
18	610	448	655	53.8	133
20	679	497	725	63.5	133
24	787	597	840	73.2	152



**Pressure Class 900**

NPS	Outside Ø A	Inside Ø B	Center Line C	THK t	Web Width W
-----	----------------	---------------	------------------	----------	----------------

1/2	60	16	80	6.4	38
3/4	67	21	90	6.4	41
1	76	27	100	6.4	57
1.1/4	86	37	110	9.7	57
1.1/2	95	43	125	9.7	67
2	140	55	165	12.7	57
2.1/2	162	67	190	12.7	67
3	165	83	190	15.7	67
4	203	108	235	19.1	76
5	244	135	280	22.4	86
6	286	162	320	25.4	86
8	356	212	395	35.1	95
10	432	265	470	41.1	105
12	495	315	535	47.8	105
14	518	346	560	53.8	114
16	572	397	615	60.5	124
18	635	448	685	66.5	133
20	696	497	750	73.2	133
24	835	597	900	88.9	152

### 3. ASME B16.48 Material Requirements

- Material Specifications: **ASME B16.48 Line Blanks** can be made from various materials, including carbon steel, alloy steel, stainless steel, and other materials that meet the mechanical and chemical requirements specified by ASME.

- Material Standards: The materials used should conform to recognized standards like ASTM, ASME, or equivalent.

- Corrosion Resistance: Depending on the application, materials selected should have adequate corrosion resistance.

Material required for **asme b16.48 line blanks** commonly are:

ASTM A105 for forged carbon steel flange

ASTM A350 for forged carbon steel, low alloy steel flange

ASTM A694 for high yield carbon steel flange

ASTM A182 for alloy steel flange, duplex steel and stainless steel flange

ASTM B564 for nickel alloy flange

#### 4. Marking Requirements

- Identification Markings: Each line blank must be marked with the manufacturer's name or trademark, the material grade, size (NPS), and pressure class.
- Heat Number: The heat number or material identification number should be stamped on the line blank for traceability.
- Service Designation: The marking must include the designation "B16.48" to indicate compliance with the ASME standard.
- Direction of Flow: For items like **asme b16.48 spectacle blinds**, the orientation or direction of flow (open or closed) should be clearly marked.

#### 5. ASME B16.48 Testing Requirements

- Hydrostatic Testing: **ASME B16.48 line blanks** are typically not required to undergo hydrostatic testing by the manufacturer, as they are considered a static component when used in piping systems. However, when they are assembled as part of a piping system, the system as a whole may be subject to pressure testing.
- Material Testing: The material used for manufacturing line blanks must meet the specified mechanical properties (such as tensile strength, yield strength, and elongation) and must pass non-destructive testing (NDT) where required by the applicable material specification.
- Impact Testing: For certain materials or applications, impact testing (Charpy V-notch) may be required, especially for materials used in low-temperature service.

#### 6. Design Considerations

- Thickness: The thickness of **ASME B16.48 Figure-8 Blanks** must be sufficient to handle the pressure class and prevent deformation under operating conditions.
- Gaskets: When using **ASME B16.48 Paddle Blank** and **ASME B16.48 Paddle Spacer** appropriate gaskets must be used to ensure a leak-proof seal.

This standard ensures that line blanks are manufactured to consistent quality and safety levels, compatible with other piping components and suitable for various industrial applications.