

**MSS SP-65-2019**

**High-Pressure  
Chemical Industry  
Flanges and Threaded Stubs  
for Use with Lens Gaskets**

**Standard Practice**  
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Manufacturers Standardization Society of the Valve and Fittings Industry

## HIGH-PRESSURE CHEMICAL INDUSTRY FLANGES AND THREADED STUBS FOR USE WITH LENS GASKETS

### PURPOSE

Flanges specified in the Standard Practice should be used only with the lens gaskets specified herein. This Standard Practice is similar in intent to ASME B16.5; however, it governs a higher pressure class and a lens gasket connection. At the time of writing this Standard Practice, no American Standard existed for pipe walls as heavy as required for this pressure class. Such piping is done mostly with seamless steel tubing. However, for purposes of flange and stub standardization, a defined set of outside diameters has been specified.

### 1. SCOPE

This Standard Practice establishes requirements for cast and forged steel flanges (welding neck and straight threaded) and threaded stubs, designed especially for use in the chemical industry, with end connections making use of lens gaskets.

### 2. PRESSURE-TEMPERATURE RATING

2.1 For referencing, the product covered in this Standard Practice shall be identified as "4000 SP-65". Pressure ratings applicable to any of the materials identified in Section 5 are provided in Table 1.

2.2 The reference temperature is the metal temperature, and in general, this is the same as the temperature of the contained fluid. Use of a pressure rating corresponding to a temperature other than that of the contained fluid is the responsibility of the user, subject to the requirements of applicable codes and standards.

**| TABLE 1 |**  
**Pressure-Temperature Ratings<sup>(a)</sup>**

| Service Temperature<br>(°F) | Maximum Pressure<br>(psi) |
|-----------------------------|---------------------------|
| -20 to 100                  | 10 000                    |
| 200                         | 9250                      |
| 300                         | 7950                      |
| 400                         | 7075                      |
| 500                         | 6575                      |
| 600                         | 6250                      |
| 650                         | 6150                      |
| 700                         | 6075                      |
| 750                         | 6000                      |
| 800                         | 5875                      |
| 850                         | 4000                      |
| Hydrostatic<br>Shell Test   | 15 000                    |

**NOTE:** (a) See Annex A for background on pressure-temperature rating development.