



## Nipple Schedule – FS fitting Class Correlation & Pressure Calculations **ASME B16.11**



Class Designation of Fitting	Type of Fitting	Pipe Used for Rating Basis*	
		Schedule No.	Wall Designation
2000	Threaded	80	XS
3000	Threaded	160	
6000	Threaded		XXS
3000	Socket Weld	80	XS
6000	Socket Weld	160	
9000	Socket Weld		XXS

*\* This Table is not intended to restrict the use of pipe of thinner or thicker wall with fittings. Pipe actually used may be thinner or thicker in nominal wall than that shown in table above. When thinner pipe is used, its strength may govern the rating. When a thicker pipe is used (e.g., for mechanical strength), the strength of the fitting governs the rating.*

The following formula from ASME B31.1 paragraph 104 and can be used for calculating the pressure-temperature rating for the corresponding pipe. Every application is different, and it is the responsibility of the purchaser to verify suitability.

$$\begin{aligned}
 & \textbf{ASME B31.1} \\
 P &= \frac{2 SE (t_m - A)}{D_o - 2 y (t_m - A)}
 \end{aligned}$$

Where:

- P** = allowable pressure (psi)
- SE** = maximum allowable stress in pipe wall (psi) from ASME B31.1 for the operating temperature.
- t<sub>m</sub>** = wall thickness (in) Note! -12.5% manufacturing tolerance on wall thickness is commonly used.
- A** = additional thickness (in) to compensate for removal of material (Threading or grooving) and/or corrosion allowance.
- y** = a coefficient depending on material and temperature range from ASME B31.1
- D<sub>o</sub>** = outside diameter (in)

***This information is provided for quick references, always consult applicable ASME, ASTM and Manufacture's standards.***