



Mid-South Control Line
Theoretical Mechanical Calculations
Other alloys and sizes available upon request.



Size/Type		Seamless							
OD	WT	Alloy	Min Tensile Strength (psi)	Min Yield Strength (psi)	Theoretical Collapse Pressure ¹ (psi)	Theoretical Burst Pressure ² (psi)	Theoretical Working Pressure ³ (psi)	Recommended Test Pressure ⁴ (psi)	
0.250	0.035	316L	75000	30000	6600	21000	6300	7600	
		825	85000	35000	7700	23800	7300	8900	
		825 E	Not Available						
		625	120000	60000	13200	33600	12600	15200	
		2205	95000	70000	15400	26600	14700	17700	
0.250	0.049	316L	75000	30000	8700	27300	8200	9900	
		825	85000	35000	10100	31000	9500	11500	
		825 E	Not Available						
		625	120000	60000	17400	43700	16400	19700	
		2205	95000	70000	20300	34600	19100	23000	
0.250	0.065	316L	75000	30000	10700	35800	10700	13000	
		825	85000	35000	12500	40600	12500	15100	
		825 E	Not Available						
		625	120000	60000	21500	57400	21500	25000	
		2205	95000	70000	25000	45400	25100	25000	
0.250	0.083	316L	75000	30000	12500	44400	13300	16100	
		825	85000	35000	14600	50400	15600	18700	
		825 E	Not Available						
		625	120000	60000	25100	71100	26700	25000	
		2205	95000	70000	29300	56300	31200	25000	
0.375	0.035	316L	75000	30000	4600	13500	4000	4900	
		825	85000	35000	5300	15300	4700	5700	
		825 E	Not Available						
		625	120000	60000	9200	21600	8100	9800	
		2205	95000	70000	10700	17100	9400	11400	
0.375	0.049	316L	75000	30000	6200	19400	5800	7100	
		825	85000	35000	7200	22000	6800	8200	
		825 E	Not Available						
		625	120000	60000	12400	31100	11700	14100	
		2205	95000	70000	14500	24600	13600	16400	
0.375	0.065	316L	75000	30000	7800	26700	8000	9700	
		825	85000	35000	9200	30300	9300	11300	
		825 E	Not Available						
		625	120000	60000	15700	42700	16000	19300	
		2205	95000	70000	18400	33800	18700	22500	
0.375	0.083	316L	75000	30000	9500	30800	9200	11100	
		825	85000	35000	11100	34900	10800	13000	
		825 E	Not Available						
		625	120000	60000	19100	49200	18500	22200	
		2205	95000	70000	22300	39000	21600	25000	
0.500	0.035	316L	75000	30000	3500	9900	2900	3600	
		825	85000	35000	4100	11200	3400	4200	
		825 E	Not Available						
		625	120000	60000	7000	15900	5900	7200	
		2205	95000	70000	8200	12600	6900	8400	
0.500	0.049	316L	75000	30000	4800	14200	4200	5200	
		825	85000	35000	5600	16100	4900	6000	
		825 E	Not Available						
		625	120000	60000	9600	22700	8500	10300	
		2205	95000	70000	11200	18000	9900	12000	
0.500	0.065	316L	75000	30000	6100	19300	5800	7000	
		825	85000	35000	7200	21900	6700	8200	
		825 E	Not Available						
		625	120000	60000	12300	30900	11600	14000	
		2205	95000	70000	14400	24500	13500	16300	
0.500	0.083	316L	75000	30000	7600	25400	7600	9200	
		825	85000	35000	8800	28800	8900	10700	
		825 E	Not Available						
		625	120000	60000	15200	40700	15300	18400	
		2205	95000	70000	17700	32200	17800	21400	

¹Theoretical Collapse pressure based on nominal OD, minimum wall thickness, and minimum yield strength, API 5C3 Formula

²Theoretical Burst & Yield pressures based on nominal OD, minimum wall thickness, and minimum mechanical properties, utilizing Claverino (t/D > 0.17) or Boardman Formulas (t/D < 0.17)

³Theoretical working pressure utilizes a 1.33 S.F. from Theoretical Yield Pressure (= Yield Pressure / 1.33)

⁴MSCL Recommended Test Pressure = 90% of Theoretical Yield Pressure (= Yield Pressure x 0.9)

825 E* - "Enhanced" properties with increased yield strengths. No orbital welds at final size.

Test pressures above 25ksi are available upon request.