TECHNICAL DATA

TEMPERATURE CORRECTION FACTORS

As the service temperature increases, the maximum pressure a hose assembly can withstand decreases. The material from which the hose is made and the method of fitting attachment (mechanical, soldered, welded, silver brazed) determines the maximum pressure at which an assembly can be used. By using the factors given in the chart below, the approximate safe working pressure at elevated temperatures can be calculated for assemblies with welded or mechanically attached fittings.

Temperature Correction Factors

TEMP ºF	SS304/304L	SS316L	SS321
70	1.00	1.00	1.00
150	0.95	0.93	0.97
200	0.91	0.89	0.94
250	0.88	0.86	0.92
300	0.85	0.83	0.88
350	0.81	0.81	0.86
400	0.78	0.78	0.83
450	0.77	0.78	0.81
500	0.77	0.77	0.78
600	0.76	0.76	0.77
700	0.74	0.76	0.76
800	0.73	0.75	0.68
900	0.68	0.74	0.62
1000	0.60	0.73	0.60
1100	0.58	0.67	0.58
1200	0.53	0.61	0.53
1300	0.44	0.55	0.46
1400	0.35	0.48	0.42
1500	0.26	0.39	0.37

Saturated Steam Pressure to Temperature (Hg)

IN of Hg	TEMP ºF
- -	0
29.84	20
29.74	32
29.67	40
29.39	60
28.89	80
27.99	100
26.48	120
24.04	140
20.27	160
15.20	180
06.46	200

Saturated Steam Pressure to Temperature

PSIG	TEMP ºF
0	212
10	238
20	259
30	274
40	287
50	298
60	307
70	320
80	324
90	331
100	338
125	353
150	366
175	377
200	388
225	397
250	406
275	414
300	422
325	429
350	436
375	442
400	448
425	454
450	460
475	465
500	470
550	480
600	489
700	505
800	520
900	534
1000	546
1250	574
1500	606
2500	669

CALCULATING THE MAXIMUM WORKING PRESSURE

Hose Specification Example

Type: FMH7
Size: 3/4" ID
Corrugated Material: SS321
Braid Material: SS304L
Number of Braid Layers: Single
Temperature: 800ºF

The FMH7 specification table lists the 3/4" ID, Single Layer Braid, Maximum Working Pressure at 70ºF at 792 PSIG. Multiply 792 PSIG by 0.73 (800ºF for SS304L listed on the Temperature Correction Factor Table) and the result will be a maximum working pressure of 578 PSIG at 800ºF