

Seamless EO stainless steel tubes (continued) Material-No.: 1.4571

Calculation pressure:

Calculation pressures given are according to DIN 2413 part I for **static stress**

$$P = \frac{20 \cdot K \cdot s \cdot c}{S \cdot d_a} \text{ (bar)}$$

Material characteristic value $K = 245 \text{ N/mm}^2$ (1.4571)
(1% proof stress)

Safety factor $S = 1.5$

Factor c for consideration of wall thickness divergence:
0.9

For range of application for which a certain safety value compared to burst pressure is demanded for tubes of 1.4571 grade stainless steel, the measured burst pressures are contained in tube-tables.

Calculation pressures according to DIN EN 2413 part III for **dynamic stress** are not listed, because in DIN 17458 the permanent fatigue stress is not listed. Until standards will be available for gauge localization of permanent fatigue strength we recommend for calculations to use DIN EN 2413 part III with the following characteristic values:
permanent fatigue strength $K=190 \text{ N/mm}^2$ for tubes of 1.4571; $S = 1.5$; $C = 0.9$.

Remarks:

Corrosion: additional allowances are not considered for the calculation of pressures.

Tubes with a diameter proportion $d_a/d_i \geq 1.35$ are calculated according to DIN 2413 III with above characteristic values.

Permissible temperature range and required

pressure reductions. This is based on calculated pressures at the elevated temperatures shown, taking into consideration the recommended reduction in proof stress (DIN EN 10216-5).

Temperature	-60° up to +20° C	50°C	100°C	200°C	300°C	400°C
Pressure reductions in %	1.4571	-	5.5	11.5	21.5	29 34

Interpolation is acceptable for intermediate temperature levels.

Seamless EO steel tubes Material C-Steel

for hydraulic and pneumatic pressure lines.

SAE J 524. C-Steel.

Test according ASTM A 179-90 A/ASME SA 179.

Quality and leak tested.

Order code (With Tube O.D. and wall thickness Inch)	Tube O.D. (mm)	Tolerance	Wall thickness (mm)	Design pressure bar		burst pressure bar	Weight kg/m
				DIN 2413 I Static	DIN 2413 III Dynamic		
R1/4X0.049	6.35	±0.08	1.24	553	450	-	0.157
R3/8X0.049PHR	9.53	±0.08	1.24	368	316	-	0.254
R3/8X0.065PHR	9.53	±0.08	1.65	489	405	-	0.321
R1/2X0.049PHR	12.70	±0.08	1.24	276	243	-	0.352
R1/2X0.065PHR	12.70	±0.08	1.65	367	314	-	0.450
R5/8X0.083PHR	16.00	±0.08	2.11	374	320	-	0.716
R3/4X0.095PHR	19.05	±0.08	2.41	357	307	-	0.990
R3/4X0.109PHR	19.05	±0.08	2.67	410	347	-	1.112
R1X0.095PHR	25.40	±0.08	2.41	268	236	-	1.368
R1X0.120PHR	25.40	±0.08	3.05	338	292	-	1.680
R11/4X0.120PHR	31.75	±0.08	3.05	271	239	-	2.157
R11/2X0.156PHR	38.10	±0.15	3.96	293	257	-	3.336