

C	Cr	Mn	Ni	P	S	SI
MAX		MAX		MAX	MAX	MAX
0.035	18.0-20.0	2.0	8.0-13.0	0.040	0.030	0.75

## CHEMICAL COMPOSITION %

## DESCRIPTION

304 stainless is a low carbon (0.08% max) version of basic 18-8 also known as 302. Type 302 has 18% chromium and 8% nickel. Type 304 has slightly lower strength than 302 due to its lower carbon content. Type 304 finds extensive use in welding applications because the low carbon permits some exposure in the carbide precipitation range of 800 F - 1500F without the need for post-annealing operations. However, the severity of corrosive environments may necessitate annealing after welding or the use of 304L. Type 304L has a carbon content of 0.03% or less. This alloy can be used in the as-welded condition without becoming susceptible to intergranular corrosion.

## DESIGN FEATURES

- Oxidation resistance up to 1650 F for continuous service and up to 1500F where cyclic heating is involved.
- General purpose corrosion resistance.
- Non-hardenable except by cold working.
- Non-magnetic except when cold worked.
- May be susceptible to chloride stress corrosion cracking.
- Used where field working is employed.

## AVAILABILITY

## SPECS

SEAMLESS PIPE	1/4" - 20"	A312
WELD PIPE	1/2" - 24"	A312
BUTT-WELD FITTINGS	1/2" - 24"	A403
SEAMLESS BUTT-WELD FITTINGS	1/2" - 12"	A403
PRESSURE FITTINGS	1/4" - 4"	A403
PLATE AND SHEET	3/16" - 4"	A240
150# FITTINGS/NIPPLES	1/4" - 4"	A403
TUBING	1/4", 3/8",	A213, A249,
	1/2", 3/4", 1"	A269
FLANGES	1/2" - 24"	A182, F304
BAR	1/8" - 12"	A276, A479
FORGINGS		A182

## TYPICAL APPLICATIONS

Sanitary  
Dairy and Food processing  
Heat exchangers, evaporators  
Feedwater heaters

## TENSILE REQ

Tensile Strength	(KSI) 70
Yield Strength	(KSI) 25

KSI can be converted to MPA (Megapascals) by multiplying by 6.895.