INDUSTRIEARMATUREN

Overview: fasteners made of austenitic stainless steel

INFO

Austenitic stainless steels play a major role in fastening technology / screw connections. The fastening elements used in our products are selected at least in steel grade A4. What these and other abbreviations mean is explained in more detail below.

ABBREVIATIONS AND CLASSIFICATION OF AUSTENITIC STAINLESS STEELS

EXAMPLE „A4-70“:

A	4	70
Abbreviation of the steel group: A = austenitic stainless steel	**Abbreviation of the steel grade:** 1 = Free cutting steel 2 = Cold heading steel alloyed with chromium and nickel 3 = Cold heading steel alloyed with chromium and nickel and hardened with tantalum, niobium and titanium 4 = Cold heading steel alloyed with chromium, molybdenum and nickel 5 = Cold heading steel alloyed with chromium, molybdenum and nickel and hardened with tantalum, niobium and titanium	**Indication of the tensile strength:** 50 = 1/10 of the tensile strength (min. 500 N/mm²) 70 = 1/10 of the tensile strength (min. 700 N/mm²) 80 = 1/10 of the tensile strength (min. 800 N/mm²)

STEEL GROUP / STEEL GRADE	MATERIAL NUMBER
A1	1.4300 1.4305
A2	1.4301 1.4303 1.4306
A3	1.4306 1.4550 1.4590
A4	1.4401 1.4404 1.4306
A5	1.4436 1.4571 1.4580

Steel grade **A1** is particularly easy to machine due to its high sulphur content, but has a lower corrosion resistance than the other steels.

Grade **A2** is the most commonly used. However, they are not suitable for applications with non-oxidising acid or chloride-containing media.

A3 steels have the same properties as A2 steels, but they are stabilised with titanium, niobium or tantalum. This improves corrosion resistance at high temperatures.

A4 steels have the same properties as A2 steels. They are alloyed with molybdenum, which significantly improves corrosion and acid resistance.

A5 steels have the same properties as A4 steels. They are stabilised with titanium, niobium or tantalum, which makes them resistant to high temperatures.

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