

Stainless Steel CAPSTAN 302HQ

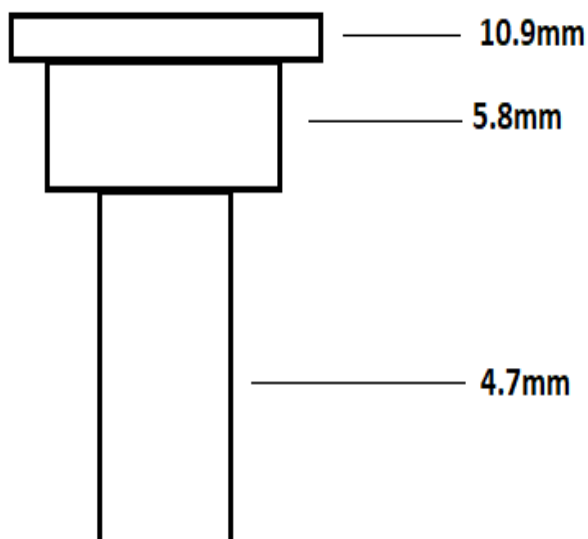
Description and Advantages

Darco Grade 302HQ is a specialised wire grade with very wide usage for manufacture of stainless-steel fasteners. The inclusion of 3% copper in the composition reduces the cold work hardening rate substantially compared to Grade 304. 302HQ is standard for manufacture of self-tapping screws and light machine screws; it is also used for some bolts, set screws, rivets and specialised fasteners. It has now totally replaced Grades 384 and 305 for cold heading applications, copper being a lower cost alternative to their high nickel contents.

The designation 302HQ is not standardised – ASTM specifications list the grade as UNS S30430, and alternative designations for the same grade include "XM-7", "304Cu" and "304HQ". The standard specification for stainless steel fasteners, ISO 3506, includes 302HQ as an acceptable composition for fastener grade "A2"; it is commonly produced in strength grades A2-70 and A2-80. The stable austenitic structure makes 302HQ non-magnetic, even after substantial cold work, and also results in excellent toughness, even down to cryogenic temperatures.

Corrosion Resistance

Equal to or exceeding that of Grade 304; Subject to pitting and crevice corrosion in warm chloride environments, and to stress corrosion cracking above about 50°C. 302HQ is considered resistant to potable water with up to about 200mg/L chlorides at ambient temperatures, reducing to about 150mg/L at 60°C.



Example: 2 Capstan washers per capstan