



Artificial Lift Services

www.Q2als.com

Q2-KINGKROME

Q2-KingKrome barrels are manufactured from precision mandrel-drawn mechanical tubing and designed to meet the latest edition of API 11AX specifications. Q2 Artificial Lift Services' KingKrome plating procedure provides a harder, smoother plated ID with more corrosion resistance than previously available in the industry. This allows you to run our barrels in more severe conditions compared to traditional chrome barrels.

DESCRIPTION

KingKrome plated barrels are precision honed ID, chemically cleaned and pre-etched and polished to meet specification. These barrels provide hardness up to 70 HRC with a minimum thickness of 0.003" per side.

Our KingKrome plating process employs a proprietary high speed catalyst which provides more uniform plating, high hardness, increases micro crack density and reduces porosity from 25-50% to less than 15% than traditional chrome barrels. These factors provide extended chrome life in abrasive conditions and protect against abrasion damage.

Solution chemistry and actual chrome plated samples are tested on a regular basis in accordance to Q2 Artificial Lift Services' strict quality management system to maintain the highest quality product.

PRODUCTS

Quality of preparation before chroming guarantees long shelf life of product & durability in the ground.

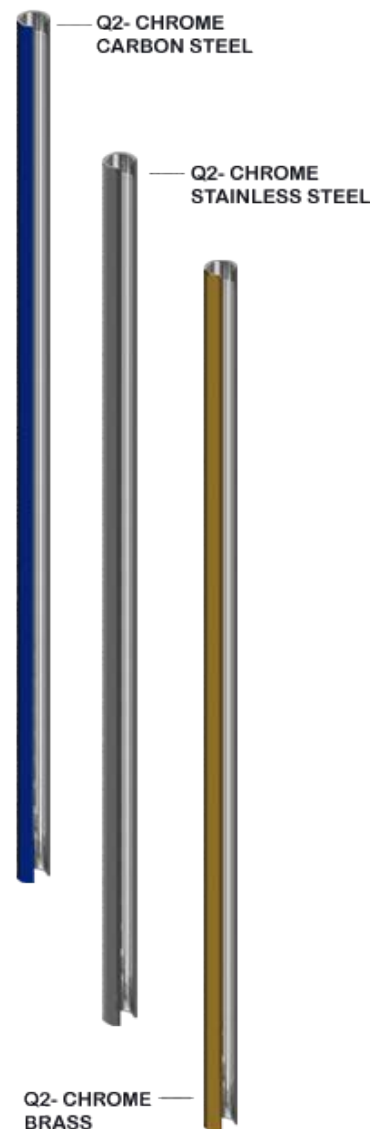
Q2-KingKrome Barrels

Standard carbon steel chrome ID barrels are made from 1026 carbon steel and meet the latest edition of API 11AX specifications and NACE standard MR0176 for A1 chrome plating on steel pump barrel material. We also have the ability to double chrome plate barrels for increased wear resistance.

Q2-KingKrome Brass Barrels

Brass chrome ID barrels are made from 443 admiralty brass, which has higher corrosion resistance than steel and meets the latest edition of API 11AX Specification and NACE Standard MR0176 for A5 chrome plating on brass pump barrel material.

Brass barrels can be used at lower pH levels and should be considered where steel chrome is flaking or where the steel is experiencing severe general corrosion. The service life of brass chrome barrel is longer than steel because galvanic reaction between the brass substrate and the chrome plate is less aggressive than steel.



Q2-KingKrome Stainless Steel Barrels

Stainless steel chrome ID barrels are made from 501 stainless steel and meets the latest edition of API 11AX specifications and NACE standard MR0176 for A3 chrome plating on 4/6 chrome steel pump barrel material.

Stainless steel barrels are higher in strength and have excellent corrosion resistance as it contains more chromium. They are recommended for severe abrasion, mild H₂S and moderate CO₂ conditions.

Duplex Chrome

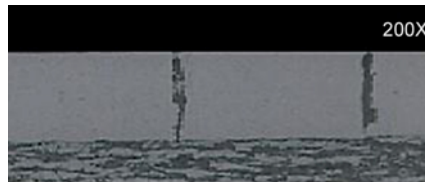
Q2 Artificial Lift Services also offers duplex chrome plating on 1026 carbon steel, 443 admiralty brass and 501 stainless steel materials. Duplex chrome provides even more wearability and corrosion resistance with an increase in thickness from 0.003" to 0.006" per side.

CORROSION RESISTANCE

Micro-crack and porosity are the two plating factors affecting corrosion resistance. Micro crack density should be high to reduce macro cracks and prevent cracks extending through to the substrate. Metallography test results below show the difference between Q2 Artificial Lift Services' chrome plating compared with Traditional chrome plating.



Q2 Artificial Lift Services' chrome plating: Micro-crack density is so tight that they are not visible. Porosity is well below 15%.



Traditional chrome plating: Macro-cracks in the plating extend thru to the substrate allowing for accelerated corrosion to occur.



Traditional chrome plating: Large porosity and micro-cracks decrease corrosion resistance.

