

Martensitic Steel

July 2016 - rev.1.0

# KLEINOX 4197

## DIN X20CrNiMoS13-1

## ASTM F899

### CHEMICAL COMPOSITION %

C%	Si%	Mn%	P%	S%	Cr%	Mo%	Ni%	Fe%
0,20	Max	Max	Max	0,15	12,50	1,10	0,75	balance
0,26	1,00	2,00	0,04	0,27	14,00	1,50	1,50	

### USES AND APPLICATIONS

**KLEINOX 4197 (AISI 420F MOD)** hardenable martensitic stainless steel has an increased S content to enhance its machinability. The Mo and Ni additions provide a hardness increase, as well as a better corrosion resistance. This steel has a good wear resistance. However, its corrosion resistance can only be satisfactory if the parts are hardened, polished and passivated.

This steel is well indicated for the production of surgical instruments.

### EXECUTIONS

<b>Diameters</b>	1.00 - 15.00 mm
<b>Tolerances</b>	ISO h8 (up to h5)
<b>Delivery conditions</b>	in cold drawn or ground bars 3m and Coils

### MECHANICAL PROPERTIES

#### Before hardening

<b>Tensile Strength</b>	ca. 750 - 950 N/mm <sup>2</sup> , depends on diameter
<b>Heat treatment</b>	hardening: 1030 - 1070°C, slow furnace cooling (2-4h) anneal: 700 - 780°C tempering: 100 - 300°C
<b>Hardness Max</b>	52 HRc
<b>Cutting speed</b>	40-55 m/min

### OTHER INFORMATION

Diagrams, treatment tabs or other information on request.