MARTENSITIC STAINLESS STEEL
Roldamax - ACX 759

DESIGNATION EN	ASTM DESIGNATION
1.4021	420
X20Cr13	

DESCRIPTION

ACX 759 is Roldan's AISI 420A's development in the Roldamax series. This steel grade belongs to the martensitic family and was developed to connect the good mechanical properties inherent to the martensitic grades with the great machinability of the Roldamax series. Furthermore, the control of its microstructure during its production process allows the achievement of an excellent quality material.

CHEMICAL COMPOSITION

C	Si	Mn	P	S	Cr	Ni	N	Cu
0.16-0.25	≤1.00	≤1.50	≤0.040	0.022-0.030	12.00-14.00	--	<0.0025	--

APPLICATIONS

ACX 759 of the high machinability ROLDAMAX range is used in all those elements that need specific properties for their machinability and where their excellent mechanical properties are needed:

- Shafts
- Nuts
- Bolts
- Gears
- Hubs
- Accessories for the automotive and aerospace industries

MECHANICAL PROPERTIES IN THE ANNEALED STATE (+A) EN10088-3

	$Rp_{0.2}$ (MPa)	Rm (MPa)	Elongation (%)	Hardness (HB)
Wire rod	-	Max 760	-	≤230
Bar +QT700	500-600	700-1000	> 15	-
Bar +QT800	650-700		> 7	-

PHYSICAL PROPERTIES

Elasticity modulus	Average coefficient of thermal expansion (20^0C-100^0C)	Thermal conductivity	Electrical resistivity	Density
215 Gpa	10.5 µm/m-^{0}C	30 W/m·k	0.55 Ω·mm^2/m	7.9 kg/dm^3

WELDING

This grade is not recommended for welding process, as it would lead to fragile welds and low corrosion resistance.

MACHINABILITY

The addition of sulphur is used to improve the machinability in martensitic grades, obtaining higher tool life, higher machining speed and better shavings.

CORROSION RESISTANCE

The corrosion resistance of this grade with the addition of sulphur has been optimized to achieve a balance with its machinability.
Its atmospheric corrosion behaviour is good, although in marine environments or in high polluted ones it can have lower performance than austenitic steel grades.

SPECIFICATIONS

It can be supplied according to international standards 10088-3 and ASTM A-276.

CERTIFICATIONS

TÜVRheinland CERTIFICADO
Sistema de Gestión
ISO 9001:2015
ISO 14001:2015
ISO 50001:2018
www.tuv.com
ID 0091003143

PLATINUM Top 1% 2023 ecovadis Sustainability Rating

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