



Catálogo de Productos
Product Catalog





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COGNE Products



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NOVA

Grupo Novametal //

Novametal Group

Pertenece al grupo NOVAMETAL con sede en Suiza y que cuenta con 8 fábricas alrededor del mundo y es un grupo especializado en Acero Inoxidable, Aluminio y Alambres de Aleación de Níquel que comercia sus productos en todo el mundo.

Our parent company, NOVAMETAL Group based in Switzerland, has 8 factories around the world and specializes in the production of Stainless Steel, Aluminum and Nickel Alloy wire and bar to meet the needs of the Global Market.



METAL

El mejor soporte //

The best support

Grupo Novametal, está respaldado por una amplia red de representantes y distribuidores en Francia, Inglaterra, Alemania y Estados Unidos. Esta amplia presencia permite a la empresa garantizar a sus clientes una relación dedicada y rápida asistencia a sus necesidades.

Novametal group is backed by a wide network of representatives and distributors in France, England, Germany and The United States. This global presence allows the company to guarantee its customers a relationship dedicated and fast assistance their needs.



Dedicados a la innovación Y al servicio

TIM como líder en la fabricación de productos de acero inoxidable, siempre está en la búsqueda de la innovación a nivel de producto y servicio.

Esto lo realizamos con la integración vanguardista de sistemas de fabricación, verificación, documentación y análisis, lo cual nos permite generar entregas justo a tiempo para nuestros clientes y así optimizar y cubrir el control de sus inventarios con un producto totalmente garantizado bajo las normas internacionales de producción y calidad, las cuales nos respaldan.



Dedicated to the innovation **And service**

As a leader in the manufacture of stainless steel products, TIM is always striving for new levels of product innovation and service that we can provide to our customers.

We realize this with ultramodern manufacturing systems integration and documentation and analysis control, which allows us to ship JIT deliveries to our customers and optimize and control inventory levels with a product completely guaranteed under international production and quality control.



Nuestra Empresa //
Our Company

Treflados Inoxidables de México, es el fabricante nacional líder en el mercado del alambre de acero inoxidable, aluminio, aleaciones de níquel y soldaduras especiales, además de ser el único fabricante en México de barras de acero inoxidable, que cuenta con el mejor equipo y la más alta tecnología para el rectificado de barras. Ofrecemos una amplia gama de soldaduras especiales para distintos procesos y son fabricadas de acuerdo a sus especificaciones.

Treflados Inoxidables de Mexico is the national leading manufacturer of stainless steel, aluminum, nickel alloy, and welding wire. We produce wire and bars for all industries including the Automotive, Aerospace, and Medical sectors. Besides being the only manufacturer in Mexico of wire and bar products, we offer specialized services including centerless ground bars and special welding wire and electrodes in all grades that meet or exceed our customer's specifications.

Además de cubrir el mercado nacional, exportamos a Europa, Estados Unidos, Centro y Sudamérica, contamos con los programas de:

We supply the national market and export our material to Europe, USA, Central and South America. Our company is registered under the next programs:



Certificación Bureau Veritas



Operador Económico Autorizado (OEA)



Nuevo Esquema de Empresa Certificada (NEEC)



PROSEC: Programa de Promoción Sectorial



Programa para la Industria Manufacturera, Maquiladora y de Servicios de Exportación, bajo la modalidad "AAA"



ALTEX: Programa de Empresas Altamente Exportadoras

Nuestra Misión // Our Mission



En TIM, tenemos un reto permanente, ocupar y mantener un lugar preferencial con nuestros clientes, superando sus expectativas en: calidad, costo y tiempo de entrega de nuestros productos, lograremos una retribución justa a los inversionistas y a los integrantes de la organización.

As TIM, we have a permanent challenge, being and maintaining a preferential place with our clients, exceeding their expectations in quality, cost and delivery time, we get a fair return for our investors and for those who integrate the organization.

Nuestra Visión //

Our Vision



TIM, equipo de trabajo con espíritu emprendedor, buscará en todo momento ser proveedor predilecto de diferentes clientes, con la finalidad de mantener una posición sobresaliente en el mercado a nivel mundial.

TIM, team with an entrepreneurial spirit, will at all times seek to be a preferred supplier of different clients, in order to maintain an outstanding position in the world market.



El acero en el mundo // Steel over the world

El acero inoxidable y aleaciones de níquel están presentes en nuestra vida diaria, desde el uso de un clavo hasta el más grande y sofisticado equipo, los cuales son utilizados en muchas industrias.

Las características principales de nuestros productos fabricados en acero inoxidable son: Calidad, Resistencia a la Corrosión, Resistencia Mecánica, Belleza del Material y larga vida del producto con un bajo costo de mantenimiento.

Stainless steel and nickel alloys are commonly used in the products that we utilize in our day to day activities, from a spring to a nail, to the biggest and most sophisticated equipment which are used in many industries.

The main Characteristics of our products made of stainless steel are: Quality, Corrosion Resistance, Mechanical Resistance, Appearance, Product life and low cost of maintenance.

Siempre presentes //

Always there



Industria Alimenticia
Food Industry



Industria Automotriz
Automotive Industry



Industria Aeroespacial
Aerospace Industry



Industria Textil
Textile Industry



Industria de Construcción
Construction Industry



Industria Medica
Medical Industry



Industria Petrolera
Oil & Gas Industry



Industria Energética
Energy Industry



Industria Naval
Naval Industry



Industria Química
Chemical Industry

Nuestra planta //

Our plant

Una planta con equipo y tecnología de punta en una localización ideal

Nuestra planta está equipada con modernas y sofisticadas máquinas desde trefiladoras, hornos, bobinadoras y equipos de medición de última generación, solo para ofrecer la calidad más exigente.

Está localizada en la Zona Industrial Xicohténcatl II en la Ciudad de Huamantla en el Estado de Tlaxcala, México y cuenta con las certificaciones ISO 9001:2015, IATF 16949:2016, ISO 14001:2015 y la Certificación Ambiental Mexicana de Industria Limpia.



Sistema de Gestión del Sector Automotriz



Programa Nacional de Auditoría Ambiental



Sistema de Gestión Ambiental



Sistema de Gestión de la Calidad

Construida sobre un terreno de 36,500 m² con una superficie de naves, oficinas y laboratorios de 13,000 m², y está destinada a la fabricación de alambres de acero inoxidable y de aleaciones de níquel desde 0.15 mm hasta 10.00 mm. los cuales se pueden surtir en rollos, botes y carretes.

Dentro de nuestro programa de fabricación en México, contamos con barras de acero inoxidable en distintos grados, desde 3.00 mm hasta 20.00 mm con un largo desde 3.0 m hasta 6.1 m.

Además, disponemos de barras en stock en nuestra planta matriz en Italia, desde 7/8" hasta 20" de diámetro, así como un stock barras hexagonales y cuadradas de distintas medidas, por lo cual podemos cubrir gran parte del mercado con una excelente calidad.

A plant with the newest technology and equipment in an ideal location

Our plant is equipped with modern and sophisticated machinery including drawing machines, annealing ovens, and winding equipment to meet the needs of our clients most demanding quality specifications.

We are located in the Xicohtencatl Industrial Park, Huamantla, Tlaxcala Mexico and we are certified to the ISO 9001:2015, IATF 16949:2016, ISO 14001:2015 standard as well as the environmental Certification of Mexican Clean Industry.



Management system
Of the Automotive Sector



National Program
Of Environmental Audit



System of
Environmental
management



Management system
Of Quality

We occupy 36,500 m² of land and our 13000 m² building includes production, warehouse, offices and laboratories dedicated to the production of stainless steel wires and nickel alloys from 0.15 mm to 10.00 mm which can be supplied in coils, spools and reels as well as stainless steel bars in all grades, in diameters ranging from 3.00 mm to 20.00 mm and lengths from 3.0 m to 6.1 m.

We also have an extensive inventory of round bars produced in our main plant in Italy, from 7/8" to 20" diameter as well as hexagonal and square bars of different sizes and grades. Please inquire on our entire bar inventory today.

Nuestros Productos //

Our products

Es importante precisar, que nosotros somos productores de la materia prima que se utiliza en todos nuestros productos, por lo tanto les aseguramos que son de la más alta calidad.

Dentro del programa de producción de TIM contamos con una amplia gama de líneas de producto las cuales son:

Grupo NOVAMETAL

Alambres Finos

Alambres para usos mecánicos y formas

Alambre de aluminio

Alambres para Forja en Frío

Alambres para Resortes

Alambres Planos y Perfiles Especiales

Soldaduras Especiales en Acero Inoxidable, para procesos

Soldaduras Especiales en Aleaciones Especiales de Níquel, para procesos

Soldaduras Especiales en Aluminio, para procesos

SUPERNOVA

Grupo COGNE

Alambrón

Barras Redondas, cuadradas y Hexagonales

CONCRINOX

Polvos

Varilla roscada de acero inoxidable

Acero para Válvulas Automotrices

Adicionalmente ofrecemos Barra Redonda Rectificada o bien, Maquila para rectificado a partir de 1 Ton., nuestro rango es de 6.00 mm a 31.50 mm. Así también ofrecemos inspección con equipos de última generación de barras redondas con Corriente Eddy Circular, Corriente Eddy en Punto Fijo, Antimix, Demag y Ultra Sonido por Inmersión en Arreglo de Fases.



It is important to note, that we are producers of all the raw materials used in our products, so we assure you that are of the highest quality.

At TIM, we have a wide range of product lines in stainless steel which include:

NOVAMETAL Group

Fine Wire
 Mechanical and forming wire
 Aluminum wire
 Cold Heading Wire
 Spring Wire
 Flat Wire and Profiles
 Special Welding on Stainless Steel
 Special Welding on Nickel Alloys
 Special Welding on Aluminum
 SUPERNOVA

COGNE Group

Wire rod
 Squared, hexagonal and rounded bars
 CONCRINOX
 Powders
 Stainless steel threaded bars
 Automotive Valve Steel

Additionally we offer centerless ground round bars or we can make a special service of centerless ground for our costumers, with a minimum quantity of 1 Ton., Our Range is from 6.00 mm to 31.50 mm. Thus we also offer inspection with the latest equipment for round bars with Eddy Current in Circograph, Eddy Current in Fixed Point, Antimix, Demag and Ultra Sound by Immersion in Phased Array.

Un mundo, una familia

Dos grandes grupos

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Productos
Products



Alambre fino

Fine wire

Producto disponible / Product availability

Novametal	AISI	EN 10088	W.Nr.
NM 302	302	X10CrNi 18-8	1.4310
NM 302M	302 Mo	X10CrNi 18-8 (Mo)	1.4310 Mo
NM 304G	304	X5CrNi 18-10	1.4301
NM 304L	304 L	X2CrNi 18-9	1.4307
NM 304V	304 L	X2CrNi 19-11	1.4306
NM 304	304 H	X5CrNi 18-10	1.4301
NM 305	305	X4CrNi 18-12	1.4303
NM 309G	309S	X12CrNi 23-13 (EN10095)	1.4833
NM 310G	310	X8CrNi 25-21 (EN10095)	1.4845
NM 314	314	X15CrNiSi 25-21 (EN10095)	1.4841
NM 316G	316	X5CrNiMo 17-12-2	1.4401
NM 316V	316 L	X2CrNiMo 17-11-2	1.4404
NM 316Ti	316 Ti	X6CrNiMoTi 17-12-2	1.4571
NM 321	321	X6CrNiTi 18-10	1.4541
NM 430L	430	X6Cr17	1.4016
NM 434	434	X6CrMo 17-1	1.4113

Acabados superficiales / Surface finishes

Brillante con aceite
Bright with oil

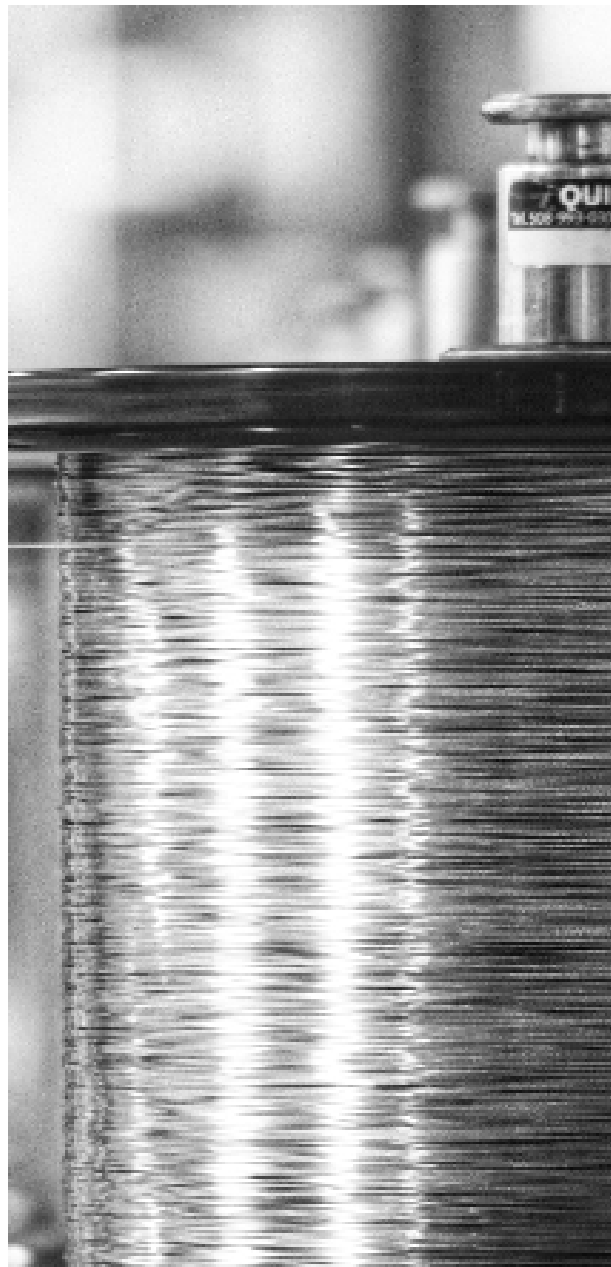
Brillante con lavado químico
Bright with chemical washing

Condiciones de suministro / Supply condition

Tabla de Tensión de Alambre

Table of Tension for wire

Tensión Tension	Rango de Tensión Ksi's Tension Range Ksi's
Recocido / Annealed	80 @ 110 Ksi's
1/4 H	110 @ 140 Ksi's
1/2 H	140 @ 170 Ksi's
3/4 H	170 @ 200 Ksi's
FH	200 @ 300 Ksi's



Propiedades mecánicas / mechanical properties

Requerido por el cliente
As required by customer

Diámetros / diameters

Estándar
de 0.16 mm a 1.00 mm
Standard
from 0.16 mm to 1.00 mm

Diámetros mayores o menores
disponibles sobre pedido
Larger/smaller diameters
available on request

Empaque para alambre fino / Packing for fine wire

Carrete plástico / Plastic spool

Spool Size	DIN 160	DIN 200	DIN 250	DIN 355	PT 90
0 mm	0.16 to 0.50	0.20 to 0.60	0.20 to 0.80	0.20 to 0.80	0.28 to 0.80
0 inches	0.006 to 0.020	0.008 to 0.024	0.008 to 0.031	0.008 to 0.031	0.008 to 0.031
Weight (kg)	6	13	20	40	90
Weight (lb)	13	29	44	88	198

Composición química para alambres finos Grades and chemical composition for fine wire

Novametal	AISI	EN 10088	W.Nr.	C	Si	Mn	P	S	Cr	Ni	Mo	others
NM 302	302	X10CrNi 18-8	1.4310	0.05 to 0.15	2.00 max	2.00 max	0.045 max	0.015 max	16.00 to 19.00	6.00 to 9.50		
NM 302 Mo	302Mo	X10CrNi 18-8 (Mo)	1.4310 Mo	0.08 to 0.12	1.30 max	1.50 max	0.30 max	0.015 max	16.50 to 17.80	8.00 a 9.00	0.60 to 0.80	
NM 304G	304	X5CrNi 18-10	1.4301	0.07 max	1.00 max	2.00 max	0.045 max	0.030 max	7.50 to 19.50	8.00 to 10.50		
NM 304L	304L	X2CrNi 18-9	1.4307	0.03 max	1.00 max	2.00 max	0.045 max	0.030 max	18.00 to 20.00	8.00 to 10.00		
NM 304V	304L	X2CrNi 19-11	1.4306	0.03 max	1.00 max	2.00 max	0.045 max	0.030 max	18.00 to 20.00	10.00 to 12.00		
NM 304	304H	X5CrNi 18-10	1.4301	0.04 to 0.10	1.00 max	2.00 max	0.045 max	0.030 max	18.00 to 20.00	8.00 to 11.00		
NM 305	305	X4CrNi 18-12	1.4303	0.03 max	0.70 max	1.00 to 2.00	0.040 max	0.010 max	17.00 to 19.00	11.00 to 13.00	0.40 max	
NM 309G	309S	X12CrNi 23-13 (EN10095)	1.4833	0.08 max	1.00 max	2.00 max	0.045 max	0.015 max	22.00 to 24.00	12.00 to 15.00		
NM 310G	310	X8CrNi 25-21 (EN10095)	1.4845	0.10 max	1.50 max	2.00 max	0.045 max	0.015 max	24.00 to 26.00	19.00 to 22.00		
NM 314	314	X15CrNiSi 25-21 (EN10095)	1.4841	0.20 max	1.50 to 2.50	2.00 max	0.045 max	0.030 max	24.00 to 26.00	19.00 to 22.00		
NM 316G	316	X5CrNiMo 17-12-2	1.4401	0.07 max	1.00 max	2.00 max	0.045 max	0.030 max	16.50 to 18.50	10.00 to 13.00	2.00 to 2.50	
NM 316V	316L	X2CrNiMo 17-11-2	1.4404	0.03 max	1.00 max	2.00 max	0.045 max	0.030 max	16.50 to 18.50	10.00 to 12.00	2.00 to 2.50	
NM 316Ti	316Ti	X6CrNiMoTi 17-12-2	1.4571	0.08 max	1.00 max	2.00 max	0.045 max	0.030 max	16.50 to 18.50	10.50 to 13.50	2.00 to 2.50	Ti =5xC/0.70
NM 321	321	X6CrNiTi 18-10	1.4541	0.08 max	1.00 max	2.00 max	0.045 max	0.030 max	17.00 to 19.00	9.00 to 12.00		Ti =5xC/0.70
NM 430L	430	X6Cr 17	1.4016	0.08 max	1.00 max	1.00 max	0.040 max	0.030 max	16.00 to 18.00			
NM 434	434	X6CrMo 17-1	1.4113	0.08 max	1.00 max	1.00 max	0.040 max	0.030 max	16.00 to 18.00		0.90 to 1.40	

Este producto es ideal para las siguientes industrias / This product is ideal for the following industries



Automotriz
Automotive



Aeroespacial
Aerospace



Médica
Medical



Petrolera
Oil & Gas



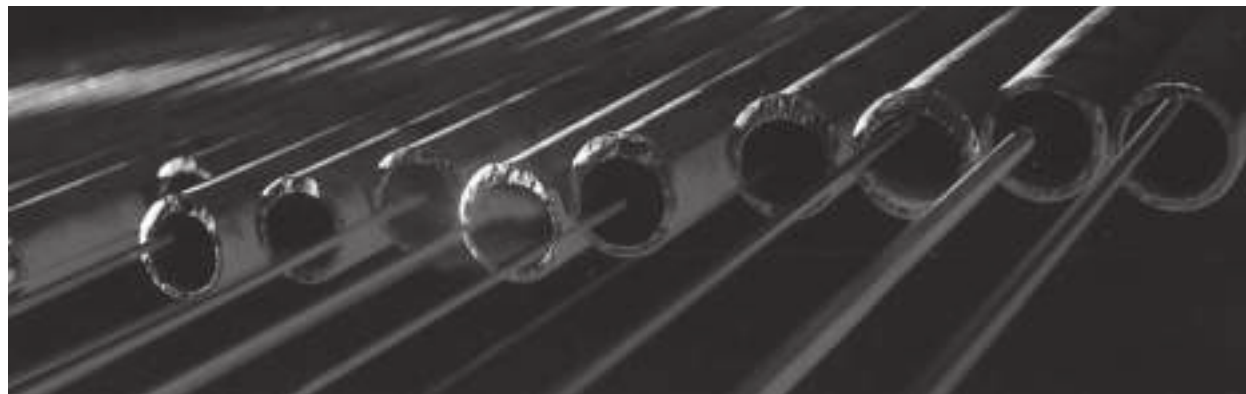
Química
Chemical



Textil
Textile

Alambres para usos mecánicos y formas

Mechanical and forming wire



Producto disponible / Product availability

Novametal	AISI	EN 10088	W.Nr.
NM 302	302	X10CrNi 18-8	1.4310
NM 302M	302 Mo	X10CrNi 18-8 (Mo)	1.4310 Mo
NM 304G	304	X5CrNi 18-10	1.4301
NM 304L	304 L	X2CrNi 18-9	1.4307
NM 304V	304 L	X2CrNi 19-11	1.4306
NM 304	304 H	X5CrNi 18-10	1.4301
NM 305	305	X4CrNi 18-12	1.4303
NM 309G	309S	X12CrNi 23-13 (EN10095)	1.4833
NM 310G	310	X8CrNi 25-21 (EN10095)	1.4845
NM 314	314	X15CrNiSi 25-21 (EN10095)	1.4841
NM 316G	316	X5CrNiMo 17-12-2	1.4401
NM 316V	316 L	X2CrNiMo 17-11-2	1.4404
NM 316Ti	316 Ti	X6CrNiMoTi 17-12-2	1.4571
NM 321	321	X6CrNiTi 18-10	1.4541
NM 430L	430	X6Cr17	1.4016
NM 434	434	X6CrMo 17-1	1.4113

Acabados superficiales / Surface finishes

Mate con jabón

Matte with soap

Brillante con aceite

Brigh with oil

Mate con lavado químico

Matte with chemical washing

Brillante con lavado químico

Brigh with chemical washing

Revestido

Coated

Condiciones de suministro / Supply condition

Tabla de Tensión de Alambre

Table of Tension for wire

Tensión Tension	Rango de Tensión Ksi's Tension Range Ksi's
Recocido / Annealed	80 @ 110 Ksi's
1/4 H	110 @ 140 Ksi's
1/2 H	140 @ 170 Ksi's
3/4 H	170 @ 200 Ksi's
FH	200 @ 300 Ksi's

Este producto es ideal para las siguientes industrias / This product is ideal for the following industries



Alimenticia
Food



Automotriz
Automotive



Aeroespacial
Aerospace



Construcción
Construction



Médica
Medical



Petrolera
Oil & Gas



Energética
Energy



Química
Chemical

Propiedades mecánicas / mechanical properties

Requerido por el cliente
As required by customer

Diámetros / diameters

Estándar
de 0.16 mm a 1.00 mm
Standard
from 0.16 mm a 1.00 mm

Diámetros mayores o menores
disponibles sobre pedido
Larger/smaller diameters
available on request

Tipos de empaque / Packing types

Rollo / coil



ø mm	1.00 to 1.60	1.60 to 5.20	> 5.20
Weight (kg)	25 to 80	100 to 200	150 to 300
ø int.mm	300 to 500	500 to 700	700 to 800

Atril metálico / Spider



Ø mm	1.60 to 6.20	> 5.20
Weight (kg)	700 to 1000	700 to 1000
Ø int.mm	420 - 480 - 530	730

Tambo de cartón / Drum



Ø mm	0.70 to 1.20	1.20 to 1.70
Weight (kg)	100 to 150	100 to 200

Rollo con centro de cartón / cardboard coil (z2)



Ø mm	1.80 to 5.20	> 5.20
Weight (kg)	600 to 1300	600 to 1300
Ø int. mm	380 - 500 - 550	500 - 550

Carrete metálico 760 / Steel reel k760



Ø mm	0.70 to 2.50
Weight (kg)	100 to 300

Composición química para uso alambres para usos mecánicos y formas Chemical composition for mechanical and forming wire

Novametal	AISI	EN 10088	W.Nr.	C	Si	Mn	P	S	Cr	Ni	Mo	others
NM 302	302	X10CrNi 18-8	1.4310	0.05 to 0.15	2.00 max	2.00 max	0.045 max	0.015 max	16.00 to 19.00	6.00 to 9.50		
NM 302 Mo	302Mo	X10CrNi 18-8 (Mo)	1.4310 Mo	0.08 to 0.12	1.30 max	1.50 max	0.30 max	0.015 max	16.50 to 17.80	8.00 a 9.00	0.60 to 0.80	
NM 304G	304	X5CrNi 18-10	1.4301	0.07 max	1.00 max	2.00 max	0.045 max	0.030 max	7.50 to 19.50	8.00 to 10.50		
NM 304L	304L	X2CrNi 18-9	1.4307	0.03 max	1.00 max	2.00 max	0.045 max	0.030 max	18.00 to 20.00	8.00 to 10.00		
NM 304V	304L	X2CrNi 19-11	1.4306	0.03 max	1.00 max	2.00 max	0.045 max	0.030 max	18.00 to 20.00	10.00 to 12.00		
NM 304	304H	X5CrNi 18-10	1.4301	0.04 to 0.10	1.00 max	2.00 max	0.045 max	0.030 max	18.00 to 20.00	8.00 to 11.00		
NM 305	305	X4CrNi 18-12	1.4303	0.03 max	0.70 max	1.00 to 2.00	0.040 max	0.010 max	17.00 to 19.00	11.00 to 13.00	0.40 max	
NM 309G	309S	X12CrNi 23-13 (EN10095)	1.4833	0.08 max	1.00 max	2.00 max	0.045 max	0.015 max	22.00 to 24.00	12.00 to 15.00		
NM 310G	310	X8CrNi 25-21 (EN10095)	1.4845	0.10 max	1.50 max	2.00 max	0.045 max	0.015 max	24.00 to 26.00	19.00 to 22.00		
NM 314	314	X15CrNiSi 25-21 (EN10095)	1.4841	0.20 max	1.50 to 2.50	2.00 max	0.045 max	0.030 max	24.00 to 26.00	19.00 to 22.00		
NM 316G	316	X5CrNiMo 17-12-2	1.4401	0.07 max	1.00 max	2.00 max	0.045 max	0.030 max	16.50 to 18.50	10.00 to 13.00	2.00 to 2.50	
NM 316V	316L	X2CrNiMo 17-11-2	1.4404	0.03 max	1.00 max	2.00 max	0.045 max	0.030 max	16.50 to 18.50	10.00 to 12.00	2.00 to 2.50	
NM 316Ti	316Ti	X6CrNiMoTi 17-12-2	1.4571	0.08 max	1.00 max	2.00 max	0.045 max	0.030 max	16.50 to 18.50	10.50 to 13.50	2.00 to 2.50	Ti =5xC/0.70
NM 321	321	X6CrNiTi 18-10	1.4541	0.08 max	1.00 max	2.00 max	0.045 max	0.030 max	17.00 to 19.00	9.00 to 12.00		Ti =5xC/0.70
NM 430L	430	X6Cr 17	1.4016	0.08 max	1.00 max	1.00 max	0.040 max	0.030 max	16.00 to 18.00			
NM 434	434	X6CrMo 17-1	1.4113	0.08 max	1.00 max	1.00 max	0.040 max	0.030 max	16.00 to 18.00		0.90 to 1.40	

Alambres de aluminio

Aluminum wire



Novametal provide a full range of aluminium and alloy wire grades and diameters for multiple applications such as rivets, studs, screws, nuts and cold forming. With over 25 years of experience in drawing aluminium we guarantee to our customers a product produced from the finest quality raw material and to the highest standards possible in order to provide:

Free defect surface wire

Superior performance even in the utmost demanding processes

Customized packing formats

ISO9001 certified quality management system for full material traceability

Diámetros / diameters

Estándar de 0.80 mm a 8.00 mm
Standard
from 0.80 mm a 8.00 mm

Diámetros mayores o menores disponibles sobre pedido
Larger/smaller diameters available on request

Producto disponible / Product availability

AL	W.Nr.	EN 573-3
NM 1050	3.0255	1050A (Al99.5)
NM 5019	3.3555	5019 (AlMg5)
NM 5005	3.3315	5005(AlMg1)
NM 5051	3.3326	5051A(AlMg2)
NM 5052	3.3523	5052(AlMg2.5)
NM 5082	3.3345	5082 (AlMg4.5)
NM 5154	3.3536	5154B(AlMg3.5Mn0.3)
NM 5754 M	3.3535	5754(AlMg3)
NM 6101	3.3207	6101(AlMgSi)
NM 6082	3.2315	6082A (AlSi1MgMn(A))
NM 1080	3.0286	1080A (Al99.8)

Acabados superficiales / Surface finishes

Brillante
White annealed

Propiedades mecánicas / mechanical properties

Novametal	USA-F	JK	D
Recocido Annealed	0	0	.10
1/4 Crudo 1/4 Hard	H12 (H22 to H32)	H2	.24
Semicrudo Half hard	H14 (H24 to H32)	H4	.26
3/4 Crudo 3/4 Hard	H16 (H26 to H36)	H6	.28
Estirado en frío Hard drawn	H18 (H28 to H 38)	H6	.30

Aleaciones y composición química / grades and chemical composition

AL	Si	FE	CU	MN	MG	CR	Zn	Ti	Al	Others
NM 1050	0.25 max	0.40 max	0.05 max	0.05 max	0.05 max	-	0.07 max	0.05 max	99.50 min	-
NM 5019	0.15 max	0.30 max	0.05 max	0.10 to 0.16	4.50 to 5.00	0.05 to 0.15	0.10 max	0.05 max	-	-
NM 5005	0.30 max	0.70 max	0.20 max	0.20 max	0.50 to 1.10	0.10 max	0.25 max	-	-	-
NM 5051	0.25 max	0.35 max	0.05 max	0.20 max	1.80 to 2.10	0.10 max	0.10 max	0.05 max	-	-
NM 5052	0.20 max	0.35 max	0.05 max	0.10 max	2.20 to 2.80	0.15 to 0.30	0.10 max	0.05 max	-	-
NM 5082	0.15 max	0.30 max	0.05 max	0.10 max	4.20 to 4.80	0.10 max	0.10 max	0.05 max	-	-
NM 5154	0.15 max	0.35 max	0.10 max	0.20 to 0.40	3.10 to 3.70	0.10 max	0.10 max	0.05 max	-	-
NM 5754 M	0.15 max	0.30 max	0.05 max	0.20 to 0.35	2.70 to 3.30	0.15 max	0.10 max	0.05 max	-	-
NM 6101	0.50 to 0.60	0.30 max	0.05 max	0.05	0.45 to 0.55	0.05 max	0.05 max	0.05 max	-	B 0.06 max
NM 6082	0.90 to 1.10	0.30 max	0.10 max	0.04 to 0.06	0.90 to 1.20	0.10 max	0.10 max	0.05 max	-	P0.003 max
NM 1080	0.15 max	0.15 max	0.03 max	0.02 max	0.02 max	-	0.06 max	0.02 max	99.80 min	Ga 0.03 max

Otras medidas, calidades y empaques están disponibles bajo solicitud / Other sizes, qualities and packaging are available upon request

Tipos de empaque / Packing types

Rollo / coil



Diameter	2.00 to 6.50
Weight (kg)	20 to 50
Inner (mm)	560

Atril metálico / Spider



Diameter	2.00 to 6.50
Weight (kg)	1.50 to 300
Inner (mm)	-

Cesta de alambre / Wire basket



Diameter	0.80 to 2.40
Weight (kg)	7 max

Rollo con centro de cartón / Cardboard coil (z2)



Diameter (mm)	1.90 to 5.50	1.90 to 6.50
Weight (kg)	100 to 200	200 to 300
Ø int. mm	380	500

Carrete metálico 760 / Steel reel k760



Diameter	0.80 to 2.70
Weight (kg)	50 to 100

Este producto es ideal para las siguientes industrias / This product is ideal for the following industries



Automotriz
Automotive



Aeroespacial
Aerospace



Médica
Medical



Petrolera
Oil & Gas



Química
Chemical



Textil
Textile

Alambre para forja en frío

Cold heading wire

Producto disponible / Product availability

Nova metal	AI SI	EN 10088	W.Nr.
NM 304Cu	302Hq	X3CrNi 18-9-4	1.4567
NM 304L	304L	X2CrNi 19-11	1.4306
NM 316V	316L	X2CrNiMo 17-11-2	1.4404
NM 316Cu	316Cu	X3CrNiCuMo 17-11-3-2	1.4578
NM410L	410	X12Cr 13	1.4006
NM420CS	420	X43Cr 13	1.4034
NM430L	430	X6Cr 17	1.4016

Acabados disponibles / Finishes available

Mate con Jabón
Matte with soap

Brillante con grasa
Grease skinpassed

Diámetro / Diameter

Estándar de 1.00 mm a 10.00 mm
Standard from 1.00 mm to 10.00 mm

Diámetros mayores o menores disponibles sobre pedido
Larger / smaller diameters available on request

Tolerancias / Tolerances

ISO h9 to DIN 671

Condición de surtimiento / Supply condition

Recocido con paso ligero de Trefilado
Annealed skinpassed

1/4 Duro
1/4 Hard

Recocido
Annealed

Acabados Superficiales / Surface finishes

Con base en los años de investigación y desarrollo del equipo técnico de Novametal se produce un recubrimiento especializado para alambres para forja en fría NCS-Nova Coating System.

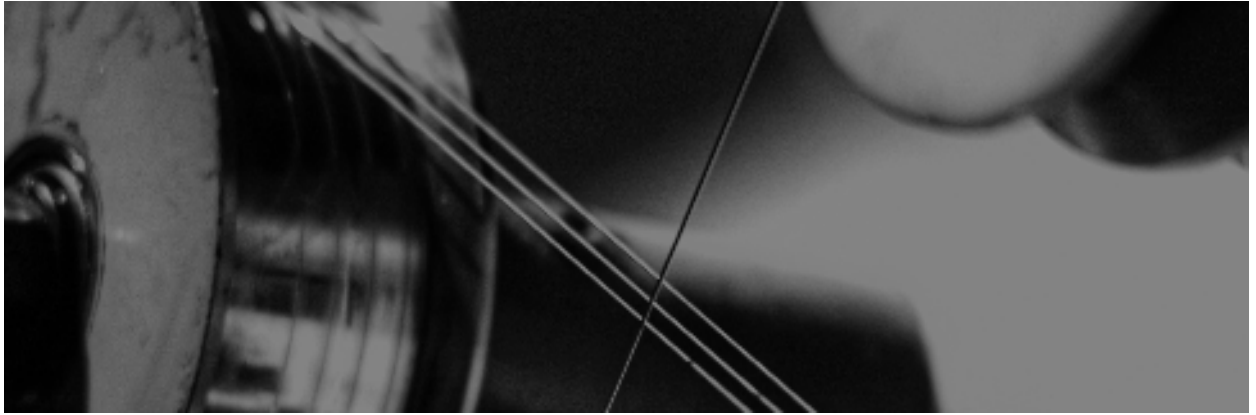
- Incrementa el formado del alambre
- Ofrece una vida útil más larga
- Fácil de remover (soluble en agua)
- Resistente a las temperaturas de preformado

With years of study and research, Novametal's technical staff have produced a specialised coating system specifically for cold heading, the NCS-Nova Coating System.

- Improve the forming of the wire
- Offer a longer shelf life
- Offer a longer toollife
- Easy to remove (soluble in water)
- Resistant to pre-forming temperatures

Propiedades Mecánicas / Mechanical properties

0 mm	NM 304L (N/mm ²)	NM 304Cu (N/ mm ²)	NM 316V (N/mm ²)	NM 316Cu (N/mm ²)	NM 430L (N/mm ²)
1.00 to 2.50	580 to 680	580 to 680	580 to 680	580 to 680	500 to 600
2.50 to 5.00	480 to 580	480 to 580	580 to 680	480 to 580	480 to 580
> 5.00	480 to 580	480 to 580	550 to 650	480 to 580	450 to 550



Empaque para alambre para forja en frío

Packing for cold heading wire

Atril metálico / Spider



0mm	1.60 to 6.20	5.00 to 10.00
Weight (kg)	600 to 1000	700 to 1000
0 int.mm	420 - 480 - 530	730

Rollo con centro de cartón (Z2) / Cardboard Coil (Z2)



0 mm	1.60 to 5.20	1.60 to 5.20	> 5.20
Weight (kg)	500 to 1000	500 to 1300	500 to 1300
0 int.mm	380	550	380 - 550

Rollo / Coil



0 mm	1.00 to 1.60	1.60 to 5.20	> 5.20
Weight (kg)	25 to 80	100 to 200	150 to 300
0 int.mm	300/500	500/700	700/800

Aleaciones y composición química / grades and chemical composition

AI SI	EN 10088	W.Nr.	C	Si	Mn	P	S	Cr	Ni	Mo	Others
302Hq / 304Cu	X 3CrNi 18-9-4	1.4567	0.04 max	1.00 max	2.00 max	0.045 max	0.03 max	17.00 to 19.00	8.50 to 10.50		Cu=3.00 to 4.00
304C	X5CrNi 18-10	1.4301	0.07 max	1.00 max	2.00 max	0.045 max	0.03 max	18.00 to 19.00	8.00 to 10.00		
304L	X2CrNi 19-11	1.4306	0.03 max	1.00 max	2.00 max	0.045 max	0.03 max	18.00 to 20.00	1 0.00 to 12.00		
316L	X2CrNiMo 17-11-2	1.4404	0.03 max	1.00 max	2.00 max	0.045 max	0.03 max	16.50 to 1 8.50	1 0.00 to 12.00	2.00 to 2.50	
316Cu	X3CrNiCuMo 17-11-3-2	1.4578	0.04 max	1.00 max	1.00 max	0.045 max	0.015 max	16.50 to 1 7.50	10.00 to 11.00	2.00 to 2.50	Cu=3.00 to 3.50
410	X12Cr 13	1.4006	0.08 to 0.15	1.00 max	1.50 max	0.040 max	0.03 max	11.50 to 13.50	0.75 max		
420	X43Cr 13	1.4034	0.43 to 0.50	1.00 max	1.00 max	0.040 max	0.03 max	12.50 to 14.50			
430	X6Cr 17	1.4016	0.08 max	1.00 max	1.00 max	0.040 max	0.03 max	16.00 to 18.00			

Otras medidas, calidades y empaques están disponibles bajo solicitud / Other sizes, qualities and packaging are available upon request

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Automotriz
Automotive



Aeroespacial
Aerospace



Construcción
Construction



Petrolera
Oil & Gas

Alambre para resorte

Spring wire

Producto disponible / Product availability

Novametal	AI SI	EN 10088	W.Nr.
NM302	302	X10CrNi 18-8	1.4310
NM304G	304	X5CrNi 18-10	1.4301
NM316G	316	X5CrNiMo 17-12-2	1.4401
NM316Ti	316Ti	X6CrNiCuMoTi 17-12-2	1.4571

Diámetro / Diameter

Estándar de 0.20 mm a 10.00 mm
Standard from 0.20 mm to 10.00 mm

Diámetros mayores o menores disponibles sobre pedido
Larger / smaller diameters available on request

Tolerancias / Tolerances

De acuerdo con / In accordance with
BS 2056
EN 10270-3 to DIN 2076/C
Requerimiento del Cliente / Customer requirement

Acabados disponibles / Finishes available

Brillante
Bright

Revestido
Coated

Propiedades mecánicas / Mechanical properties

De acuerdo con / In accordance with
ASTM A313
BS 2056
EN 10270-3 to DIN 2076/C
Requerimiento del cliente / Customer requirement

Condiciones de suministro / Supply condition

Alambre estirado en frío
Hard drawn wire

Empaque para alambre para resorte

Packing for wire for springs


Rollo / Coil

	0 mm	0.70 to 1,60	1.60 to 10.00
	Weight (kg)	15 to 80	100 to 200
	0 int.mm	300/500	500/700


Rollo con centro de cartón / Cardboard coil (z2)

	0 mm	1.60 to 6.00
	Weight (kg)	500 to 1000
	0 int.mm	380

Bobina / Spool

	0 mm	0.20 to 0.50
	Weight (kg)	20 to 40

Carrete de metal k760 / Steel reel k760

	0 mm	0.50 to 2.50
	Weight (kg)	150 to 250

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Automotriz
Automotive



Aeroespacial
Aerospace



Médica
Medical



Petrolera
Oil & Gas

Grados y composición química / Grades and chemical composition

NOVAMETAL	AI SI	EN 10088	W.Nr.	C	Si	Mn	P	S	Cr	Ni	Mo	Others
NM 302	302	X1 0CrNi 18-8	1.4310	0.05 to 0.15	2.00 max	2.00 max	0.045 max	0.03 max	16.00 to 19.00	6.00 to 9.50		
NM 304G	304	X5CrNi 1 8-1 0	1.4301	0.07 max	1.00 max	2.00 max	0.045 max	0.03 max	17.50 to 19.50	8.00 to 1 0.50		
NM 316G	316	X5CrNiMo 17-12-2	1.4401	0.07 max	1.00 max	2.00 max	0.045 max	0.03 max	16.50 to 18.50	10.00 to 1 3.00	2.00 to 2.50	
NM 316Ti	316Ti	X6CrNiCuMoTi 17-12-2	1.4571	0.08 max	1.00 max	2.00 max	0.045 max	0.03 max	16.50 to 1 8.50	10.50 to 13.50	2.00 to 2.50	Ti =5xC/0.70

Otras medidas, calidades y empaques están disponibles bajo solicitud / Other sizes, qualities and packaging are available upon request.



Alambres planos y perfiles

Flat wire and profiles

Alambre plano / Flat wires

Parámetro de sección de 0.59 a 45 mm²
Section parameters from 0.59 to 45 mm²

Sección plana con bordes redondos
Flat rolled section with natural rounded edges

Sección rectangular plana con bordes redondos
Rectangular flat rolled section with round corners

Sección rectangular plana con bordes cuadrados
Rectangular flat rolled section with square corners

Sección cuadrada con bordes redondos
Squared rolled section with round corners

Sección cuadrada con bordes cuadrados
Squared rolled section with square corners






Sección plana con bordes completamente redondeados
Flat rolled section with full rounded edges

Sección Hexagonal
Hexagonal rolled section

1/2 Caña
Half-round

1/4 ó 3/4 Caña
Part-round

Datos de alambre fino / Flat wire data

Tipo de sección Section type		Bordes naturales Natural rounded edges	Rectangular Rectangular fit		Cuadrado Squared	
			Borde redondeado Rounded corners	Borde Cuadrado Squared corners	Borde redondeado Rounded corners	Borde Cuadrado Squared corners
						
Sección / Section	Min	0.5 mm ²	0.5 mm ²	0.5 mm ²	0.5 mm ²	0.5 mm ²
	Max	45 mm ²	45 mm ²	45 mm ²	45 mm ²	45 mm ²
Ancho / Width	Min	0.8 mm	0.8 mm	0.8 mm	0.8 mm	0.8 mm
	Max	15 mm	15 mm	15 mm	7 mm	7 mm
Tolerancia / Tolerance	<5mm	± 0.05 standard ± 0.025 on request				
	>5mm	± 0.1 standard ± 0.04 on request				
Espesor / Thickness	Min	0.25 mm	0.25 mm	0.8 mm	0.8 mm	0.8 mm
	Max	6 mm	6 mm	6 mm	7 mm	7 mm
Tolerancia / Tolerance	<2mm	± 0.025 standard ± 0.015 on request				
	>2mm	± 0.05 standard ± 0.02 on request				
Radio / Radius		n/a	over 0.2 mm	under 0.2 mm	over 0.2 mm	under 0.2 mm

Otras secciones / Other rolled sections



Redondeado completamente
Full rounded edges



Hexagonal



1/2 Caña
Half Round



1/4 ó 3/4 Caña
Part Round



■ Perfiles especiales / Special profiles

Parámetros de acuerdo a especificación del cliente
Section parameters from according to customers specifications

Oval
Oval

Triangular
Triangular

Cualquier forma geométrica compleja
Any complex geometrical shapes

Por favor contáctenos para cualquier requerimiento en específico
Please contact us with your specific requirement

■ Perfiles de filtración / Filtration profiles

Grupo Novametal es el mayor productor de perfiles de precisión en el mercado.

The Novametal Group is a major producer of profiles for the precision filtration in the market.

Industria del agua
Water Industry

Industria del Petróleo y Gas Natural
Petroleum and Natural Gas Industry

Industria Petroquímica
Petrochemical Industry

Industria Química
Chemical Industry

Industria Minera
Mining Industry

Industria Farmacéutica
Pharmaceutical Industry

■ Tolerancias de perfiles / Profile tolerances

Nuestra experiencia nos permite ayudar a nuestros clientes, en su búsqueda continua de tolerancias mas cerradas. Garantizamos una variación de 2/100th mm en una longitud de 10 km.

Tomamos en cuenta requerimientos específicas de flexión, torsión, camber y cast.

Our expertise allows us to assist our clients in their continued quest for closer and closer tolerances. Thus, for certain profiles, we guarantee a variation of 2/100 th mm over a length of 10 km.

We also take into account our clients specific requirements concerning bending, twisting, camber and cast.

■ Material disponible / Material available

Acero Inoxidable Stainless Steel	Acero Al Carbón Carbon Steel	No Ferroso Non-Ferrous
Ferrítico Ferritic	Suave Mild	Bronce Bronze
Martensítico Martensitic	Suave Galvanizado Mild Galvanised	Latón Brass
Austenítico Austenitic	Duro Hard	Níquel Plata Nickel Silver
Super Inoxidable Super Inox	Aleaciones Alloys	Monel Monel
Duplex Duplex		Cobre Copper
		Titanio Titanium

Otros materiales disponibles bajo pedido.
Other materials available on request.

■ Otros empaques / Other packaging



Otros tamaños, calidades y empaques están disponibles bajo solicitud.

Other sizes, qualities and packaging are available upon request.

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries


Petrolera
Oil & Gas


Energética
Energy


Química
Chemical


Alimenticia
Food


Automotriz
Automotive


Médica
Medical

Soldaduras especiales de acero inoxidable

Special welding of stainless steel
(TIG-MIG-SAW-Core wire)

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Alimenticia
Food



Automotriz
Automotive



Aeroespacial
Aerospace



Construcción
Construction



Petrolera
Oil & Gas



Naval
Naval



Química
Chemical

Opciones de suministro / Supply options

Soldadura MIG / MIG Welding



Carrete de alambre
Wire Basket



Mega carrete
Mega Reels



Bobina de plástico
Plastic Spools



Tambos de cartón
Wire Drums

Núcleo para Electrodo / Electrode Core Wire



Rollo con centro
de cartón
Coil



Varilla cortada
Cut Length

Soldadura TIG Welding TIG



Cajas y tubos
Boxes & Tubes

Soldadura SAW SAW Welding



Soldadura para arco
sumergido
Submerged Arc
Welding

Equivalencias cercanas / *= nearest equivalent

Producto disponible / Product availability

Product	AWSA5.9	EN 14343-A	WERKSTOFF No.
NMS307	ER307*	18 8 Mn	1.4370
NMS 307Si	ER307Si*	18 8 Mn	1.4370
NMS308AWS	ER308L	19 9 L	1.4316
NMS308H	ER308H	19 9 H	1.4302
NMS 308LSi	ER308LSi	19 9 LSi	1.4316
NMS308LF	ER308L	19 9 L	1.4316
NMS308LN	ER308L	19 9 L	1.4316
NMS309H	ER309*	22 12 H	1.4829*
NMS309L	ER309L	23 12 L	1.4332
NMS 309LSi	ER309LSi	23 12 LSi	1.4332
NMS309LN	ER309L	23 12 L	1.4332
NMS310	ER310	25 20	1.4842
NMS 312	ER312	29 9	1.4337
NMS316AWS	ER316L	19 12 3 L	1.4430
NMS316H	ER316H	19 12 3 H	1.4403*
NMS 316LSi	ER316LSi	19 12 3 LSi	1.4430
NMS 316LF	ER316L	19 12 3 L	1.4430
NMS316LN	ER316L	19 12 3 L	1.4430
NMS317I	ER317L	18 15 3 L	1.4438*
NMS 318	ER318	19 12 3 Nb	1.4576
NMS 318Si		19 12 3 NbSi	1.4576
NMS 320LR	ER320LR		
NMS 347	ER347	19 9 Nb	1.4551
NMS 347H	ER347*	19 9 Nb	1.4551
NMS 347Si	ER347Si	19 9 Nb Si	1.4551
NMS409	ER409Nb		
NM\$410	ER410	13	1.4009*
NMS420C	ER420		1.4031
NMS430	ER430	17	1.4015
NMS430LNB			1.4511
NMS430NBT			
NMS904L	ER385	20 25 5 Cu L	1.4539*
NMS 1.4313	ER410NiMo*	13 4	1.4351
NMS 1.4455	ER316LMn	20 16 3 Mn L	1.4455
NMS 1.4459	ER309LMo*	23 12 2 L	1.4459*
NMS 1.4462	ER2209	22 9 3 N L	1.4462
NMS 25.94	ER2594	25 9 4 N L	
NMS 1.4122			1.4122
NMS 1.4502	ER439*	Z 17Ti	1.4502
NMS 1.4718			1.4718

Soldaduras especiales de aleaciones de níquel

Special welding of nickel alloys (TIG-MIG-SAW-Core wire)

Producto disponible / Product availability

Producto Product	Grado Grade	Aws	Grado Grade	Iso	W.nr.
NMN NICK3	ERNiCr-3	A5.14	NiCr20Mn3Nb-S Ni 6082	18274	2.4806
NMN NICKM03	ERNiCrMo-3	A5.14	NiCr22Mo9Nb-S Ni 6625	18274	2.4831
NMN NICKM04	ERNiCrMo-4	A5.14	NiCrMo 16FeW4-S Ni 6276	18274	2.4886
NMN NICKM010	ERNiCrMo-10	A5.14	NiCrMo 13FeW3 -S Ni 6022	18274	2.4635
NMN NICKM013	ERNiCrMo-13	A5.14	NiCr23Mo 16-S Ni 6059	18274	2.4605
NMN NICKRCOM01	ERNiCrCoMo-1	A5.14	NiCr22Co 12Mo9-S Ni 6617	18274	2.4663
NMN NIFERICR1	ERNiFeCr-1	A5.14	NiFe30Cr29Mo-S Ni 8065	18274	2.4858
NMN NICU7	ERNiCu-7	A5.14	NiCu30MnTi-S Ni 4060	18274	2.4377
NMN N11	ERNi-1	A5.14	NiTi3-S Ni2061	18274	2.4155
NMN FN55	ERNiFe-C1	A5.15			2.4472*
NMN FN60			SCNiFe1	1071	2.4560*
NMN N99	ENi-C1	A5.15			2.4060
NMRCUNI	ERCuNi	A5.7	CuNi30Mn1 Fe Ti -SCu 7158	24373	2.0837
NMRCUS13	ERCuSi-A	A5.7	CuSiMn - S Cu 6560	24373	2.0837

Equivalencias cercanas / * = nearest equivalent

Opciones de suministro / Supply options

Soldadura MIG

MIG Welding



Carrete de alambre
Wire Basket



Mega carrete
Mega Reels



Bobina de plástico
Plastic Spools



Tambos de cartón
Wire Drums

Núcleo para electrodo

Electrode core wire



Rollo con centro de cartón
Coil



Varilla cortada
Cut Length

Soldadura TIG

Welding TIG



Cajas y tubos
Boxes & Tubes

Soldadura SAW

SAW Welding



Soldadura para arco sumergido
Submerged Arc Welding

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Alimenticia
Food



Automotriz
Automotive



Aeroespacial
Aerospace



Construcción
Construction



Petrolera
Oil & Gas



Naval
Naval



Química
Chemical

Soldaduras especiales de aluminio

Special welding of aluminum

(TIG-MIG-SAW-Corewire)

Producto disponible / Product availability

Producto Product	AWSA5.10	ISO 18273	DIN 1732	WERKSTOFF No.
NMA 1050	ER1100*	Al 1 070 Al99.7*	Al 99.5	3.0289
NMA4043	ER4043	Al4043 Al Si 5	Al Si 5	3.2245
NMA4047	ER4047	Al4047 AlSi 12	Al Si 12	3.2585
NMA 5087		Al 5087 AlMg4.5MnZr	Al Mg 4.5 MnZr	3.3546
NMA 5183	ER 5183	Al 5183 AlMg4.5Mn	Al Mg 4.5 Mn	3.3548
NMA 5356	ER 5356	Al 5356 AlMg5	Al Mg 5	3.3556
NMA 5554	ER 5554	Al 5554 AlMg2.7Mn	Al Mg 2.7 Mn	3.3538
NMA 5556	ER 5556	Al 5556A AlMg5Mn		
NMA 5754	ER 5654*	Al 5754 AlMg3	AlMg 3	3.3536

Equivalencias cercanas / * = nearest equivalent

Producto Product		Certificación registrada Registered certification							
		ABS	BV	CWB	DB	DNV	LR	RINA	TUV
NMA4043	MIG	✓	✓	✓		✓	✓	✓	✓
NMA 5183	MIG	✓	✓	✓	✓	✓	✓	✓	✓
NMA 5356	MIG	✓	✓	✓	✓	✓	✓	✓	✓

Opciones de suministro / Supply options

Soldadura MIG

MIG Welding



Carrete de alambre
Wire Basket



Mega carrete
Mega Reels



Bobina de plástico
Plastic Spools



Tambos de cartón
Wire Drums

Núcleo para Electrodo

Electrode Core Wire



Rollo con
centro de cartón
Coil



Varilla cortada
Cut Length

Soldadura TIG

Welding TIG



Cajas y tubos
Boxes & Tubes

Soldadura SAW

SAW Welding



Soldadura para arco
sumergido
Submerged Arc
Welding

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Alimenticia
Food



Automotriz
Automotive



Aeroespacial
Aerospace



Construcción
Construction



Petrolera
Oil & Gas



Naval
Naval



Química
Chemical

BS 300 SPOOL

High Quality / Strong / Total recyclable

The best metallic spool for layer wound spooling

Main properties

According norm ISO 544:2003

Manufactured in hard copper drawn steel wire Ø 4mm

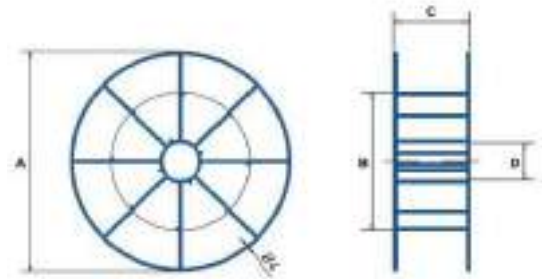
Available copper coated or biodegradable plastic coated

Precise spool technology, high speed winding and feeding quality

Spool capacity up to 18Kg / 40Lbs

Size details

Dimension		Mm	Inch
Outside Diameter	A	300	11.81
Inside Diameter	B	189	7.44
Outside Width	C	103	4.06
Arbor Hole Diameter	D	52	2.05



Colors available



Black



Blue



Red



Copper coated

Other colours on request

Packing

Pallet dimension:

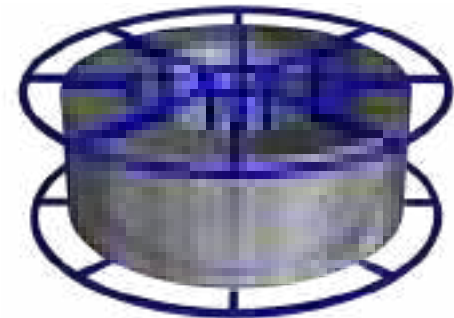
1250 x 800 x 2200 mm

300 spools per pallet

Full truck: 9600 spools

20" container: 3600 spools

40" container: 7860 spools



Supernova 316

Líneas de medición de profundidad para exploración de pozos petroleros

Depth measurement lines for exploration of oil wells



SUPERNOVA 316

UNS S31600
WN 1.4401

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Longitudes estándar / Standard lengths

20,000 pies

25,000 pies

Propiedades mecánicas / Mechanical properties

Díámetro Diameter	Carga mínima de ruptura Min break load	Tensión mínima Min tensile	Peso/1000 pies Wt/1000 ft	RSL
0.092"	1420 lbf	1460 N/mm ²	22.64 lbs	75%
0.108"	1940 lbf	1440 N/mm ²	31.20 lbs	75%
0.125"	2530 lbf	1420 N/mm ²	41.80 lbs	75%
0.140"	3130 lbf	1530 N/mm ²	53.00 lbs	75%
0.160"	4050 lbf	1380 N/mm ²	69.00 lbs	75%

RSL / Carga recomendada de seguridad = 75% de la carga de ruptura.
EBL / Carga efectiva de Ruptura = Medición de la carga de ruptura menos el peso de herramientas y de la línea en uso.

R5L / Recommended Safe Load = 75% of Effective Break Load
EBL / effective Break Load = Actual measured BL minus weight of tools and wire in use.

Composición química / Chemical composition

Grado Grade	C	Mn	Si	Ni	Cr	Mo	N
Supernova 316	Min	-	-	-	10.00	2.00	0.03
	Max	0.08	2.00	1.00	13.80	18.00	0.06

PRE: 23.5 - 27

Díámetros estándar / Standard diameters

0.092"

0.108"

0.125"

0.140"

0.160"

Tolerancia/tolerance: +/-0.001"

Otros diámetros y longitudes se pueden fabricar bajo solicitud.

Other diameters and lengths are available on request.

Todas las líneas están 100% probadas con NDT y libres de soldaduras intermedias.

All lines are 100% NDT tested and free of welds.

Se recomienda para las siguientes condiciones de pozos

Is recommended for the following well conditions

Apropiada para condiciones de baja amenaza de corrosión

Is suitable for use in Low Corrosive Conditions

Puede ser usada hasta 35% de presencia de C=2 (sin presencia de H2S)

Can be used in up to 35% of CO₂ (with Zero H₂S)

Puede ser usada con bajo contenido de cloratos, hasta 3.5%

Can be used in Low Chloride Conditions of up to 3.5%

Puede ser usada a altas temperaturas, hasta 180°C

Can be used in High Temperature- up to 150°C

SUPERNOVA 400

SUPERNOVA 400

UNS S32205
WN 1.4462

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Petrolera
Oil & Gas

Longitudes estándar / Standard lengths

20,000 pies

25,000 pies

Propiedades mecánicas / Mechanical properties

Diámetro Diameter	Carga mínima de ruptura Min Break Load	Tensión mínima Min Tensile	Peso/1000 pies Wt/1000 ft	RSL
0.092"	1630 lbf	1690 N/mm ²	22.48 lbs	75%
0.108"	2190 lbf	1620 N/mm ²	30.95 lbs	75%
0.125"	2850 lbf	1550 N/mm ²	41.49 lbs	75%
0.140"	3500 lbf	1530 N/mm ²	52.10 lbs	75%
0.160"	4200 lbf	1480 N/mm ²	68.03 lbs	75%

RSL / Carga recomendada de seguridad = 75% de la carga de ruptura.
EBL / Carga efectiva de Ruptura = Medición de la carga de ruptura
menos el peso de herramientas y de la línea en uso.

R5L / Recommended Safe Load = 75% of Effective Break Load
EBL / effective Break Load = Actual measured BL minus weight of tools
and wire in use.

Composición química / Chemical composition

Grado Grade	C	Mn	Si	Ni	Cr	Mo	N
Supernova 400	Min	-	-	-	10.00	16.50	0.03
	Max	0.03	2.00	1.00	6.00	23.00	0.20

PRE: 31.65 - 37

Supernova 400 Líneas de medición de profundidad para exploración de pozos petroleros Depth measurement lines for exploration of oil wells

Diámetros estándar / Standard diameters

0.092" 0.108" 0.125" 0.140" 0.160"

Tolerancia/tolerance: +/-0.001"

Otros diámetros y longitudes se
pueden fabricar bajo solicitud.

Other diameters and lengths are
available on request.

Todas las líneas están 100%
probadas con NDT y libres de
soldaduras intermedias.

All lines are 100% NDT tested and
free of welds.

Se recomienda para las siguientes condiciones de pozos

Is recommended for the following
well conditions

Buen comportamiento en
presencia de cloratos, hasta 30%
sin presencia de H2S

Very good in Chloride Conditions
of up to 30%, with Zero H2S

Buen comportamiento en concen-
traciones de CO2, hasta 30% sin
presencia de H2S

Very good in High CO2 Conditions
of up to 30%, with Zero H2S

Puede ser usada a altas
temperaturas, hasta 150° C

Can be used in High
Temperature - up to 150°C

Supernova 700

Líneas de medición de profundidad para exploración de pozos petroleros

Depth measurement lines for exploration of oil wells



SUPERNOVA 700
UNS 531254

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Longitudes estándar / Standard lengths

20,000 pies

25,000 pies

Propiedades mecánicas / Mechanical properties

Diámetro Diameter	Carga mínima de ruptura Min Break Load	Tensión mínima Min Tensile	Peso/1000 pies Wt/1000 ft	RSL
0.092"	1610 lbf	1650 N/mm ²	23.30 lbs	75%
0.108"	2120 lbf	1600 N/mm ²	32.00 lbs	75%
0.125"	2650 lbf	1490 N/mm ²	42.90 lbs	75%
0.140"	3130 lbf	1410 N/mm ²	54.10 lbs	75%
0.160"	3920 lbf	1380 N/mm ²	70.00 lbs	75%

RSL / Carga recomendada de seguridad = 75% de la carga de ruptura.
EBL / Carga efectiva de Ruptura = Medición de la carga de ruptura menos el peso de herramientas y de la línea en uso.

RSL / Recommended Safe Load = 75% of Effective Break Load
EBL / effective Break Load = Actual measured BL minus weight of tools and wire in use.

Composición química / Chemical composition

Grado Grade		C	Mn	Si	Ni	Cr	Mo	Cu	N
Supernova 700	Min	-	-	-	17.50	19.50	6.00	0.50	0.15
	Max	0.02	1.00	0.80	18.50	21.00	6.50	1.00	0.25

Diámetros estándar / Standard diameters

0.092" 0.108" 0.125" 0.140" 0.160"

Tolerancia/tolerance: +/-0.001"

Otros diámetros y longitudes se pueden fabricar bajo solicitud.

Other diameters and lengths are available on request.

Todas las líneas están 100% probadas con NDT y libres de soldaduras intermedias.

All lines are 100% NDT tested and free of welds.

Se recomienda para las siguientes condiciones de pozos

Is recommended for the following well conditions

A temperatura (mezcla ácida de HS2 +Cloratos) con alta concentración de CO2

Hot & Sour (H2S + Chlorides) with high CO2

Puede ser usada a altas temperaturas hasta 250°C

High Temperature up to 250°C

Cualquier concentración de HS2+CO2

All Concentrations of H2S +CO2

Concentraciones hasta 25% de cloratos con HS2 y presencia de CO2

Concentrations of up to 25% Chloride with H2S and CO2 present

SUPERNOVA 750

SUPERNOVA 750

UNS N08926
WN 1.4529

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Petrolera
Oil & Gas

Longitudes estándar / Standard lengths

20,000 pies

25,000 pies

Propiedades mecánicas / Mechanical properties

Diámetro Diameter	Carga mínima de ruptura Min Break Load	Tensión mínima Min tensile	Peso/1000 pies Wt/1000 ft	RSL
0.092"	1560 lbf	1605 N/mm ²	23.31 lbs	75%
0.108"	2115 lbf	1535 N/mm ²	32.00 lbs	75%
0.125"	2860 lbf	1595 N/mm ²	42.90 lbs	75%
0.140"	3280 lbf	1450 N/mm ²	54.10 lbs	75%
0.160"	4200 lbf	1440 N/mm ²	70.00 lbs	75%

RSL / Carga recomendada de seguridad = 75% de la carga de ruptura.
EBL / Carga efectiva de Ruptura = Medición de la carga de ruptura
menos el peso de herramientas y de la línea en uso.

RSL / Recommended Safe Load = 75% of Effective Break Load
EBL / effective Break Load = Actual measured BL minus weight of tools
and wire in use.

Composición química / Chemical composition

Grado Grade	C	Mn	Si	Ni	Cr	Mo	Cu	N
Supernova 750	Min	-	-	-	24.50	19.50	6.00	0.12
	Max	0.02	1.00	0.80	26.00	21.00	6.70	1.00

Supernova 750

Líneas de medición de profundidad para exploración de pozos petroleros

Depth measurement lines for exploration of oil wells

Diámetros estándar / Standard diameters

0.092" 0.108" 0.125" 0.140" 0.160"

Tolerancia/tolerance: +/-0.001"

Otros diámetros y longitudes se
pueden fabricar bajo solicitud.

Other diameters and lengths are
available on request.

Todas las líneas están 100%
probadas con NDT y libres de
soldaduras intermedias.

All lines are 100% NDT tested and
free of welds.

Se recomienda para las siguientes condiciones de pozos

Is recommended for the following
well conditions

A temperatura (mezcla
ácida de HS2 + Cloratos)
con alta concentración de CO2

Hot & Sour (H2S + Chlorides)
with high CO2

Puede ser usada a altas
temperaturas hasta 250°C

High Temperature - up to 250°C

Cualquier concentración
de HS2+CO2

All Concentrations of H2S +CO2

Concentraciones hasta 30% de
cloratos con HS2 y presencia
de CO2

Concentrations of up to 30%
Chloride with H2S and CO2 present

Supernova 100

Super Dúplex de acero inoxidable slickline

Super Duplex Stainless Steel Slickline



SUPERNOVA 100
UNS S32760
WN 1.4501

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Petrolera
Oil & Gas

Longitudes estándar / Standard lengths

20,00 pies 22,000 pies 25,000 pies

Propiedades mecánicas / Mechanical properties

Diámetro Diameter	Carga mínima de ruptura Min Break Load	Tensión mínima Min Tensile	Peso/1000 pies Wt/1000 ft	RSL
0.092"	1750 lbf	1805 N/mm ²	22.10 lbs	75%
0.108"	2380 lbf	1800 N/mm ²	30.55 lbs	75%
0.125"	3200 lbf	1820 N/mm ²	41.03 lbs	75%
0.140"	4050 lbf	1760 N/mm ²	51.54 lbs	75%
0.160"	5150 lbf	1760 N/mm ²	67.45 lbs	75%

RSL / Carga recomendada de seguridad = 75% de la carga de ruptura.
EBL / Carga efectiva de Ruptura = Medición de la carga de ruptura
menos el peso de herramientas y de la línea en uso.

RSL / Recommended Safe Load = 75% of Effective Break Load
EBL / Effective Break Load = Actual measured BL minus weight of tools
and wire in use.

Composición química / Chemical composition

Grado Grade	C	Mn	Si	S	P	Ni	Cr	Mo	Cu	N	W
Supernova 100	Min	-	-	-	-	6.00	24.00	3.00	0.50	0.20	0.50
	Max	0.03	1.00	1.00	0.015	0.03	8.00	26.00	4.00	1.00	1.00

PRE: > 41

Diámetros estándar / Standard diameters

0.092" 0.108" 0.125" 0.140" 0.160"

Tolerancia/tolerance: +/-0.001"

Otros diámetros y longitudes se
pueden fabricar bajo solicitud.

Other diameters and lengths are
available on request.

Todas las líneas están 100%
probadas con NDT y libres
de soldaduras intermedias.

All lines are 100% NDT tested
and free of welds.

Se recomienda para las siguientes condiciones de pozos

Is recommended for the following
well conditions

Elevadas propiedades mecánicas
conservando buena ductilidad

High mechanical properties whilst
retaining good ductility

Excelente resistencia al
agrietamiento por corrosión por
estrés por cloruro y sulfuro

Excellent resistance to chloride
and sulphide stress corrosion
cracking

Excelente resistencia a la
corrosión ácida y a la corrosión
por grietas

Excellent resistance to acid
corrosion and crevice corrosion

Alta resistencia a la fatiga por
abrasión, fatiga y corrosión

High resistance to abrasion,
fatigue and corrosion fatigue

SUPERNOVA





Productos
Products



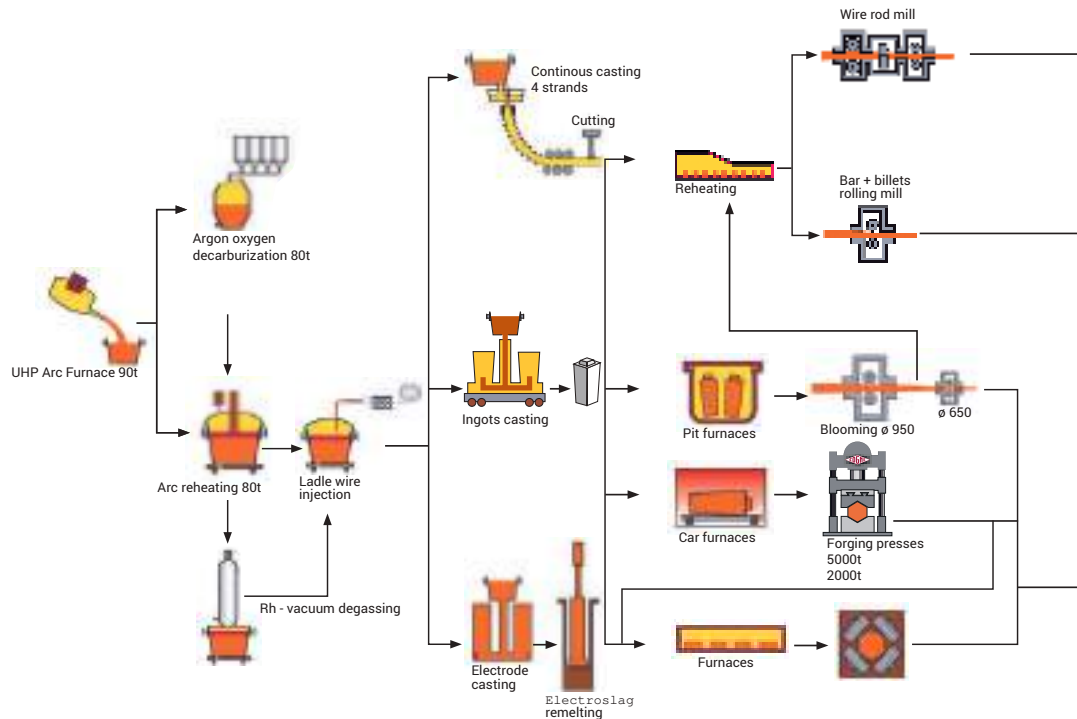


Cogne
Acciai Speciali Group
represents the worldwide famous brand for stainless and special steel products.

Its mission is to specialize in niche markets and to respond professionally to all the needs of its customers. Through its R&D centre and technical expertise, the Aosta valley mill has managed to diversify its production and offers a unique range of high level products, in accordance with the highest international standards. In an extremely competitive business,

Cogne by its experience and applied R&D translates into top quality, reliable products using modern production equipment.

In the pursuit of the highest quality standards and product reliability, Cogne has always invested in both human and technological resource.



The main Production facilities Of the Aosta plant

- Steel shop: UHP electric arc furnace (80 tons), AOD converter (80 tons), RH degassing (80 tons), continuous casting unit (3-4 strands: blooms 220x270mm or 310x350mm; billets 160x160mm), blooming mill. That equipment is integrated by an ESR furnace (Electroslag Remelting Unit), intended for the production of special grades where a high degree of purity is required.
- Forging shop: 2 pull-down oleodynamic presses: 5000 tons and 2000 tons; and GFM SXP 40 hammer machine.
- Rolling mill: integrated bar and wire rolling mill (bars 16-105mm; wire rod 5,5-32 mm) heat treatment furnaces, pickling unit, blooming ø 950/650.
- Finishing dept.: peeling machines, drawing machines, grinding machines.
- Machines shop: CNC machine tools suitable for the production of pieces up to about 24 m. in length.
- Powder production unit: air induction furnace, atomization tower in inert gas, ultra-sonic vibrating separation machine.

Stainless steel

Austenitic, ferritics, martensitics, duplex, precipitation hardening steels (PH), superaustenitics

• Semifinished products

Ingots 3,5 - 70 tons
 Rolled Square blooms 150 - 200 mm
 Forged Square blooms 250-800 mm
 Forged round blooms 250 - 800 mm

• Wire rod

Size: \varnothing 5,5 mm to 32 mm;
 Execution: rolled, heat treated and pickled;
 Weigh of coil: 1000/1400 kg

• Bars

Size: \varnothing 3,2 mm to 900 mm;
 Execution: rolled, cold drawn,
 peeled and reeled, centreless ground

• Stainless steel bars for concrete

reinforcement rebar (in bar or coil)
 Size: 3 - 12 mm = cold ribbed
 14 - 50 mm = hot rolled and pickled

• S. S. Electrowelded frames

(meshes and girders)
 Upon request.

Automotive

• Valve steel bars

Size: \varnothing 5 mm to 23 mm;
 Execution: hot or centreless ground
 in martensitic and austenitic steels.

• Stainless steel bars

Size: \varnothing 3,2 mm to 400 mm;
 Execution: rolled, cold drawn, peeled
 and reeled, centreless ground.

Tool steel

• Bars

Rounds: size \varnothing 101 mm to 934 mm max
 Execution: peeled, smooth turned Flats (milled):
 width 810 mm max; area 150.000 mm² max.
 Flats (forged, quenched and tempered):
 width 1020 mm max; area 280.000 mm² max.

Special products

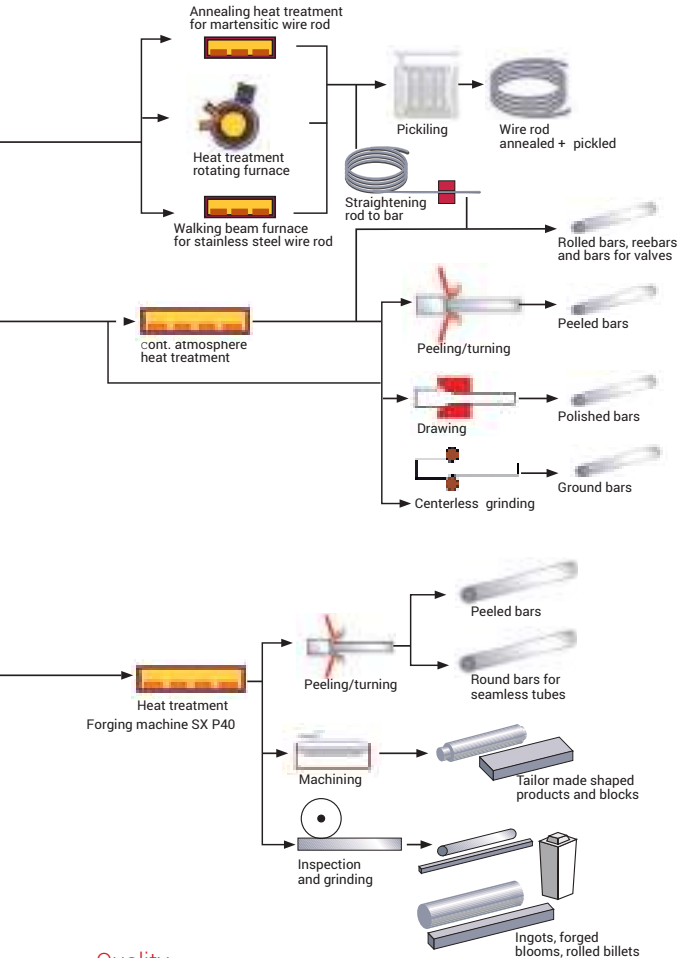
• Cylinders for hot and cold rolling

• Seamless pipe mill tools (mandrels, cylinders, rolls)

• Forged components for mechanical and iron and steel industries

Powders

Gas atomized wear resistant cobalt, nickel,
 iron and copper based alloys powders.



Quality

Moreover, together with continuous improvements in the production process, Cogne has achieved certification of Environmental Management System ISO14001 by IGQ; of Quality Management UNI EN ISO 9001:2008 and /TS 16949:2009, is accredited by TÜV, ISO/TS, Det Norske Veritas (DNV) for our steel used in the naval sector, UK CARES, NORSOK APPROVAL M-650. Other technical standards are also available for specific applications.

Acero inoxidable

Stainless steel

Stainless steel	Cogne grade	Improved Machnability	EN/DIN/UNI	W.N.	B.S.	SIS (WIDIN)	AISI/ASTM/ASME
Austenitic grades	30/31	IMCO®	X8CrNiS 18-9	1.4305	303S31	2346	303 8FB8F
	303K	IMCO®	X6CrNiCus 18-9-2	1.4570			
	304R		X2CrNi 19-11	1.4306	304S12	2352	304L
	F304	IMCO®	X5CrNi18-10	1.4301	304S31	2333	304 B8
	304K		X3CrNiCu18-9-4	1.4567	394S17		304 Cu
	F304L	IMCO®	X2CrNi 19-11	1.4306	304S12	2352	304L
	F304L1	IMCO®	X2CrNi 18-9	1.4306	304S11	304I	
	309Si		X15 CrNiSi 20-12	1.4828	309S24		309
	F316	IMCO®	X5CrNiMo17-12-2	1.4401	316S32	2347	316 8M B8M
	316K		X3CrNiCuMo 17-11-3-2	1.4578	396S17		
	F316L	IMCO®	X2CrNiMo 17-12-2	1.4404	316S11	2348	316L 8M B8M
	316Lk	IMCO®		1.4427			
	316LM2	IMCO®	X2CrNiMo 18-14-3	1.4435	316s13	2353	316L
	316LM1		X2CrNiMo 18-14-3	1.4441	4341/B	2354	316L F138gr2
	316LM		X2CrNiMo 18-14-3	1.4435	316S13	2353	316L
	316R		X2CrNiMo 17-12-2	1.4404	316S12	2348	316L
	316T/1	IMCO®	X6CrNiMoTi 17-12-2	1.4571	320S31	2350	316Ti
321/3	IMCO®	X6CrNiMoTi 18-10	1.4541	321S31		321	
Martensitic grades	410/2		X12Cr13	1.4006	410S21	2302	410
	4106	IMCO®	X12Cr13	1.4006	410S21	2302	410
	E415		X3CrNiMo 13-4	1.4313	425C12		F6NM
	415M		X4CrNiMo 16-5-1	1.4418		2387	
	416/1	IMCO®	X12CrS13	1.4005	416S21	2380	416
	420A/7	IMCO®	X20Cr13	1.4021	420S29	2303	420L
	420B/4	IMCO®	X30Cr13	1.4028	420S37	2304	420M
	420BF/2	IMCO®	X29CrS13	1.4029	416S37		420F
	420C		X39Cr13	1.4031	420S45		420H
	420C/1		X46Cr13	1.4034			
	420CF	IMCO®	X45CrS13	1.4035			
	420C/4	IMCO®	X46Cr13	1.4034			
	420D		X65Cr13	1.4037			
	420RM1		X39CrMo 17-1	1.4122			
	431/1	IMCO®	X17CrNi 16-2	1.4057	431S29	2321	431
	440B		X90CrMoV18	1.4112			440B
	440C/2		X105CrMo17	1.4125			440C
616C		X20CrMoV 12-1	1.4922		2317		
616		X20CrMoWV 12-1	1.4935			422	
Ferritic grades	430/1		X6Cr17	1.4016	430S17	2320	430
	430F/3	IMCO®	X14CrMoS17	1.4104		2383	430F
	430/6		X6CrMoS17	1.4105			430F
	434		X6CrMo171	1.4113	4344S17		434
Duplex grades	329/1	IMCO®	X3CrNiMoN 27-5-2	1.4460		2324	329
	329A		X2CrNiMoN 22-5-3	1.4462	318S13		F51 Cr22
	329S		X2CrNiMoN 25-7-4	1.4501			F55
	329S/1		X2CrNiMoN 25-7-4	1.4410			F53 CR25
Heat resisting Grades	310/1		X8CrNi25-21	1.4845	310S31	2361	310S
	347		X6CrNiNb 18-10	1.4550	347S31	2338	347
	354		X1CrNiMoCuN 25-18-7	1.4547			F44
Precipitation hardening grades	630/3	IMCO®	X5CrNiCuNb 16-4	1.4542			
	SF286		X6NiCrTiMoVB 25-15-2	1.4980	286S31		660
Super alloy grades	409L		X1NiCrMoCu 25-20-5	1.4539	904S13	2652	904L

Productos standard/ Standard product

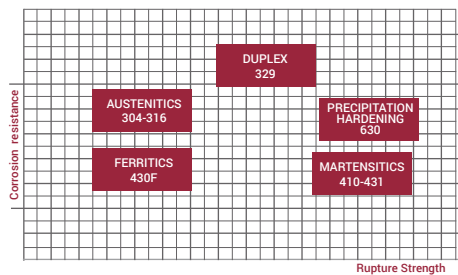
	Rolled and Reeled	Peeled and Reeled	Rough Reeled	Cold Drawn	Rough Ground	Centreless Ground	Hexagons	Cold Drawn
Size mm	6-100	20-101-60	102-304	3-26	26-60	3-140	11-55	10-22
Tolerance	EN10060/DIN 1013	ISO I.T. 10/I.T. 11	EN10060/DIN1013	ISO I.T.9	ISO I.T.9	ISO I.T.9/I.T.6	ISO I.T. 11	ISO I.T. 11
Surface	Rolled	Rolled	Peeled	Cold Drawn	Rough Ground	Centr.Ground	Cold Drawn	Cold Drawn
Roughness		2.5 µ Ra	5 µ Ra	1.25 µ Ra	1.2 µ Ra	.3/0.8 µ Ra	1.6 µ Ra	1.6 µ Ra
Straightness	2%	1%	2%	.8%	.5%	.2/0.5%	1%	1%
Heading	Coldheading at 1 or 2 extremities upon request							
Chamfering	at 1 or 2 extremities at 30°-45° upon request							
Standar Length	3000 to 6000 mm	3000 to 6200mm	4000 to 6000 mm	3000 to 3200 mm	3000 to 3200 mm	3000 to 3200 mm	3000 to 3200 mm	3000 to 3200 mm
Tolerance on length	∅ < 25mm ±100; ∅ > 25mm ± 200							

N.B.: speciallengths upon request.

Special finishing processes: products for further galvanising such as chromium plating, nickel plating etc.

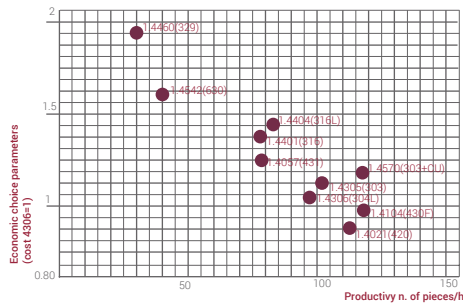
Project choice parameters

The project parameters takes into consideration corrosion resistance and mechanical characteristics, when making the choice of material.



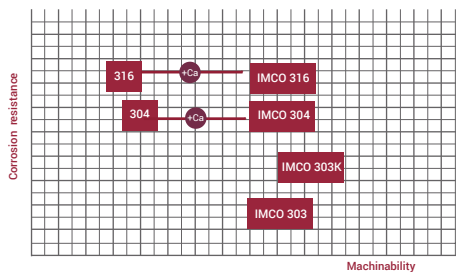
Economic choice parameters

A comparison between the various cost parameters of the different stainless steel grades should be taken into consideration in the choice of the steel together with project parameters.



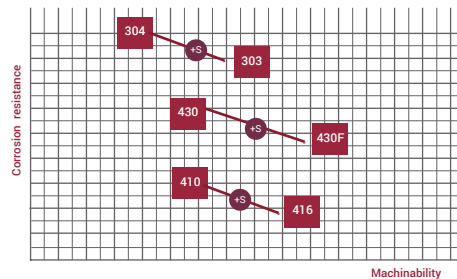
Calcium effect on corrosion and machinability

Stainless steel processing with calcium brings about inclusions that have positive effects on the break up of the turnings without decreasing corrosion resistance. The addition of copper to steel grades 303 and 316 improves corrosion resistance and machinability.



Sulphur effect on corrosion and machinability

The greatest contribution to improve machinability is obtained by adding sulphur, thereby creating numerous sulphide inclusions that help in the break up of the turnings



Barras de acero inoxidable redondo, cuadrado y hexagonales

Stainless steel bars; rounds, square and hexagonal



Producto disponible / Product availability

Novametal	AI SI	EN 10088	W.Nr.
303	303	X8 CrNiS 18-9	1.4305
304	304	X5 CrNi 18-10	1.4301
304L	304L	X2 CrNi 18-9	1.4307
316	316	X5 CrNiMo 17-12-2	1.4401
316L	316L	X2 CrNiMo 17-12-2	1.4404
416	416	X12 Cr S13	1.4005
420A	420	X20Cr13	1.4021
420B	420	X30Cr13	1.4028
420C	420	X39 Cr 13	1.4031
430L	430	X6 Cr 17	1.4016
431	431	X17 CrNi 16-2	1.4057

Medidas / Sizes

Sección Section	Diámetro Standar Standard Diameter	Largo Length
Redonda Round	2.00 Up to 32.00Mm	3 Metres Up to 6 Metres
Cuadrada Square	6.00 Up to 22.00Mm	3 Metres Up to 6 Metres
Hexagonal Hexagonal	4.00 Up to 27.00Mm	3 Metres Up to 6 Metres

Propiedades mecánicas / mechanical properties

Requerido por el cliente
As required by customer

Empaque para barras / Packing for bars



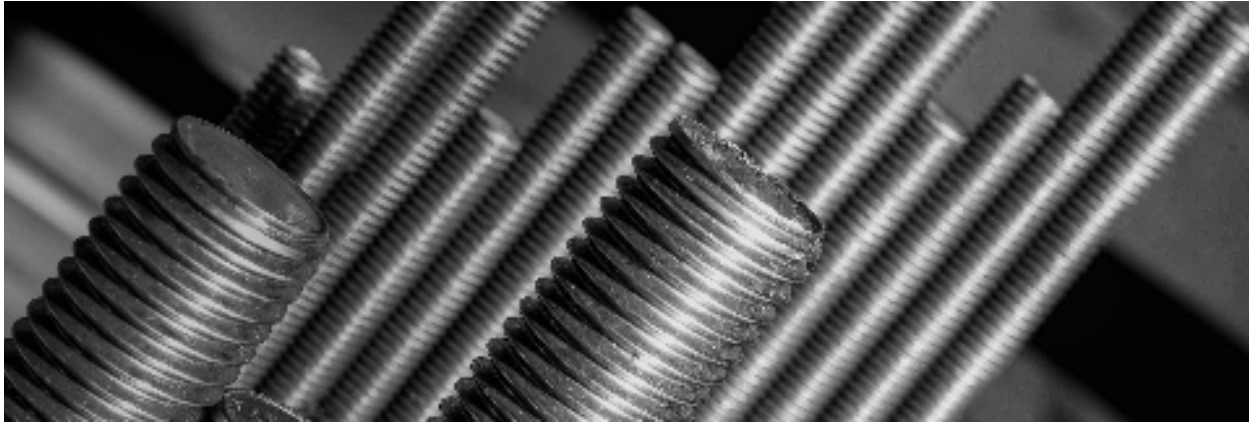
Otros tamaños, calidades y empaques
están disponibles bajo solicitud
Other sizes, qualities and packaging are
available upon request.

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Varilla roscada de acero inoxidable

Stainless steel threaded bars



DIN 975
UNC
UNF

TO ASTM A 193 STM A320
CLASS1 A2-304 1 B8
A4-316 / B8M

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Construcción
Construction



Petrolera
Oil & Gas



Química
Chemical

Peso Unitario / Unit weight

m	M5	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30	M33	M36	M39
1	0,124	0,177	0,319	0,500	0,725	0,970	1,330	1,650	2,080	2,540	3,000	3,900	4,760	5,760	7,100	8,450
3	0,372	0,531	0,957	1,500	2,175	2,910	3,990	4,950	6,240	7,620	9,000	11,700	14,280	17,280	21,300	25,350
6	0,744	1,062	1,914	3,000	4,350	5,820	7,980	9,900	12,480	15,240	18,000	23,400	28,560	34,560	42,600	50,700

Peso Unitario / Unit weight

feet	1/4 UNC	5/16 UNC	3/8 UNC	7/16 UNC	1/2 UNC	5/8 UNC	3/4 UNC	7/8 UNC	1 UNC	1-1/8 UNC	1-1/4 UNC	1-1/8 UN	1-1/4 UN	1-1/2 UNC	1-1/2 UN
3	0,170	0,275	0,403	0,552	0,731	1,158	1,697	2,332	3,055	3,860	4840	3,940	4,960	7,100	7,400
6	0,341	0,551	0,806	1,104	1,462	2,316	3,393	4,664	6,111	7,720	9,680	7,880	9,920	14,200	14,800
12	0,682	1,102	1,612	2,208	2,924	4,632	6,786	9,336	12,222	15,400	19,300	15,760	19,840	28,400	29,600

Peso Unitario / Unit weight

feet	1/4 UNF	5/16 UNF	3/8 UNF	7/16 UNF	1/2 UNF	5/8 UNF	3/4 UNF	7/8 UNF	1 UNF
3	0,185	0,294	0,436	0,592	0,790	1,254	1,821	2,484	3,240
6	0,370	0,587	0,873	1,184	1,579	2,508	3,642	4,968	6,480
12	0,740	1,174	1,746	2,368	3,158	5,016	7,284	9,936	12,960

Clavos también disponibles bajo pedido
Studs also available upon request



Varilla de acero inoxidable para construcción

Corrugated stainless steel
bars for construction

■ Especificaciones / Specifications

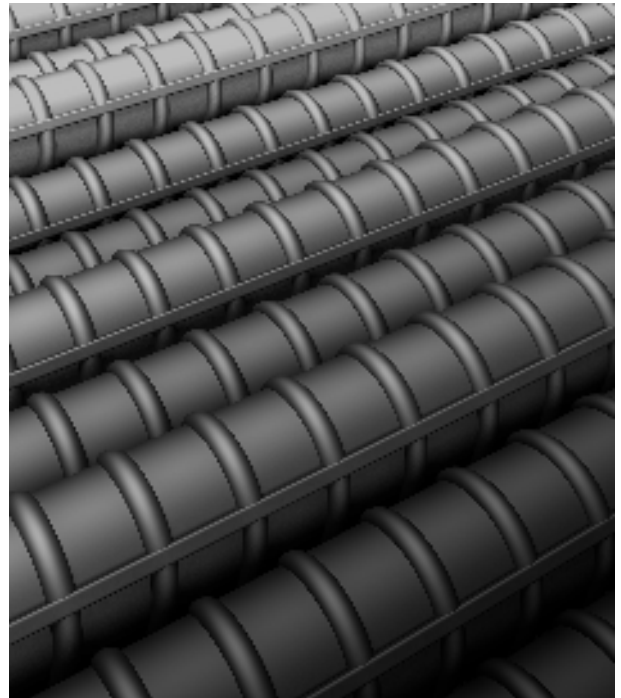
Las propiedades mecánicas de las barras de acero inoxidable, están dadas en la norma estándar BS 6744:2001 y la norma ASTM 9SS-9SSM. Relativas a las normas italianas (DM09/01/96) se refieren a las normas FeB44k, en términos generales es válida para aceros de baja aleación de carbono para lo que se requiere lo siguiente:

Standard norms for stainless steel mechanical properties of bars are given in BS 6744:2001 and in ASTM 9SS-9SSM. Concerning Italian norms (DM09/01/96) refer to FeB44k norms, general term valid for low alloyed carbon steels for which the following is required:

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Construcción
Construction



Fuerza rendimiento típico
Typical yield strength **$f_{yk} > = 430 \text{ N } 1 \text{ mm } 2$**

Resistencia a la rotura típica
Typical rupture strength **$f_{tk} > = S40 \text{ N } 1 \text{ mm } 2$**

Ductilidad relación
Ductility ratio **$f_y / f_{yk} < = 1,3S$**

Alargamiento A5
Elongation AS **$> = 12\%$**

BS 6744:2001

Para BS 6744:2001 se tratan los siguientes
aceros inoxidables para (EN 10088-1):
For BS 6744:2001 the following stainless
steels are covered for (EN 10088-1):

■ Tabla 2 - Propiedades de Tensión Table 2 - Tensile properties

Grado Grade	0,2% de alargamiento Rp0,2MPa 0,2% proof strength Rp0,2 MPa	Estrés relación RM/Rp0,2 (min) Stress ratio Rm/Rp0,2 (min)	Alargamiento de rotura A5 (min)% Elongation at fracture A5 (min)%	Alargamiento total de la fuerza máxima Agt (min)% Total elongation at max force Agt (min)%
200*	200	1,10	22	5
500	500	1,10	14	5
650	650	1,10	14	5

■ Tabla 1 - Tamaños estándar Table 1 - Standard Sizes

Grado Grade	Tamaños nominales (mm) Nominal sizes (mm)
200*	3, 4, 5, 6, 7, 8, 10, 12, 14, 16, 20, 25, 30, 35, 40, 50
500	3, 4, 5, 6, 7, 8, 10, 12, 14, 16, 20, 25, 30, 40, 50
650	3, 4, 5, 6, 7, 8, 10, 12, 14, 16, 20, 25

*Solo llanura / Plain only

Rm es la resistencia a la tracción final * Solo llanura / Rm is the ultimate tensile strength, * Plain only

ASTM A 955m

Para ASTM 955m austeníticos, ferríticos, martensíticos y dúplex de acero, están de acuerdo con la norma ASTM especificación A 262. For ASTM 955M austenitic, ferritic, martensitic and duplex stainless steels are in accordance with ASTM A 262 specification.

Tabla 3 - Propiedades de Tensión
Table 3 - Tensile properties

Grado Grade	0,2% de alargamiento Rp0,2MPa 0,2% proof strength Rp0,2 MPa	Resistencia a la Tracción (min) MPa Tensile strength (min) MPa	Alargamiento en 200mm (min)% Elongation in 200mm (min)%	Designación de Barra n.* Bar designation n.*
300	300	500	11-12	10-13-16-19
420	420	620	7-9	10-13-16-19-22-25-29-32-36-43-57
520	520	690	6-7	19-22-25-29-32-36-43-57

* Se trata de un valor codificado que corresponde casi al diámetro de la barra nominal, expresado en mm.
It is a codified value that corresponds almost to the bar nominal diameter expressed in mm.

UNE 36-067-941

Para UNE 36-067-941 las propiedades son:
For UNE 36-067-94 the properties are:

Grado Grade	0,2% de alargamiento Rp0,2MPa 0,2% proof strength Rp0,2 MPa	Resistencia a la Tracción (min) MPa Tensile strength (min) MPa	Alargamiento en 200mm (min)% Elongation in 200mm (min)%	Rm/Rp mínimo Rapporto Rm/Rp Mínimo
B500T INOX	500	600	18	1,10
B600T INOX	600	700	18	1,10

Productos de identificación cogne

Cogne products identification



Barra laminada en caliente
Hot-rolled bars



Barra estirado en frío (trefilado)
Cold drawn bars



Las barras fabricadas por cogne acciai speciali cumplen con las normas italianas y europeas env 10088/94.
The rebars produced by cogne acciai speciali are marked according to the italian and european norms env 10088/94.

De acuerdo con el decreto ministerial DM 9/1/96 y 16/ 1/96, Cogne Acciai Speciali, los productos para aplicaciones en la construcción, están certificadas por "Scienze della Costruzione e Geo-struttura" la sección del "Politecnico di Torino":

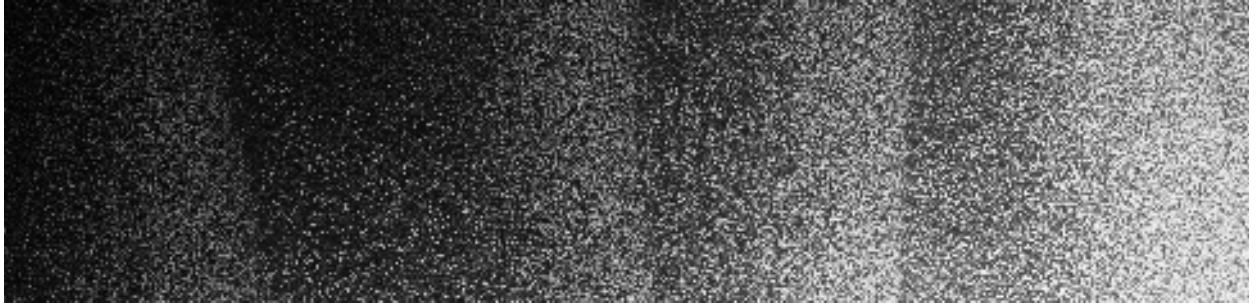
In accordance with the ministerial decrees D.M. 9/1/96 and 16/1/96, Cogne Acciai Speciali products for building application are certified by the Section 'Scienze della Costruzione e Geo-struttura' of the 'POLITECNICO DI TORINO'.

Cogne Acciai Speciali productos para aplicaciones de construcción están certificados por CARES Reino Unido.

Cogne Acciai Speciali products for building application are certified by CARES UK.

Polvos

Powders



Welding powder

Powder welding is traditionally applied using oxy-acetylene torch (simple to use and low cost). The most suitable materials to employ are **NiBSi self-fluxing alloys**. The presence of B and Si gives good fluidity, reduces the melting point and allows the use at low temperatures (1000°C), obtaining a coating compact, well diluted and strongly bonded to the base material.

NiBSi self-fluxing alloys have good oxidation and wear resistance. The addition of Cr and Mo increases corrosion and hot oxidation resistance. The microstructure of the coating consists of a ductile Nickel matrix and hard particles, constituted by several elements. The alloying elements and their proportional quantity give a wide range of hardness to the **NiBSi self-fluxing alloys**, 18 – 60 HRC.

The coating obtained has a smooth and bright surface which allows minimal or no machining (hardness coating below 25 HRC).

PTA powder

The welding process by plasma transferred arc (PTA) employs plasma, originated by an electric arc, as a vector gas. The transferred arc also melts the base material on which the molten powder is applied, giving a typical dilution of - 5 % . The coating obtained has full density, chemical anchorage and so a high wear resistance.

The temperatures achieved in PTA process are elevated and allow to use Cobalt base powder and Nickel and Iron super-alloys. PTA machine is completely automated, suitable for a wide range of high volume production, such as petrochemical and automotive sectors, plastic and glass industry.

Cobalt base super-alloys

COGNE Grade	C	Si	Cr	W	Ni	Mo	Co	Properties
CO01	2.5	1.2	30	12.5	-	-	bal.	600 HV
CO06	1.1	1.2	28	4.5	-	-	bal.	400 HV
CO12	1.5	1.2	29	8.0	-	-	bal.	450 HV
CO21	0.2	1.0	27	-	2.5	5.5	bal.	350 HV
CO25	0.1	1.0	20	15	-	-	bal.	280 HV
CO1F	1.7	1.2	26	12.5	22.5	-	bal.	400 HV

All Co base alloys retain the mechanical properties at elevated temperature. High resistance to hot corrosion and hot oxidation. Good erosion and wear resistance

Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Automotriz
Automotive



Aeroespacial
Aerospace



Petrolera
Oil & Gas



Química
Chemical

Thermal spray

In thermal spray process powder is molten and accelerated toward the device to be metalized.

The coating obtained has high mechanical anchorage and good density up to 99.5%, according to the metal spraying method applied.

The thermal source, used to melt the particles, classifies thermal spraying processes.

- **Combustion Spray**, exploits combustion energy. Main deposition techniques are:

Flame-Powder, Detonation Gun and **HVOF** where high spraying speed is achieved (1000 m/s) obtaining well anchored coating with good density.

- **Plasma Spray**, exploits plasmogen gas (Ar, N₂, H₂) generated by an electric arc inside the torch. Temperatures reached are high, ~ 15000 °C, as well as the speed of particles ~100–300 m/s, at room pressure, until 400 m/s, at low pressure.

Special chemical analysis or grain distribution are available upon request

Iron base alloys

COGNE Grade	C	Si	Cr	Ni	Mo	Mn	Others	Fe	Commercial grade	Properties	
304L	< 0.03	0.5	18	11	-	1.3		bal.	1.4306	< 200 HV	Austenitic stainless steel
316L	< 0.03	0.5	17	12	12	1.5		bal.	1.4404		
630	0.05	0.4	17	4.0	-	-	Cu: 4.0 Nb: 0.4	bal.	1.4542 - 17-4 PH	< 380 HV	Precipitation hardening steel
410	0.12	0.3	13	-	-	-		bal.	1.4006	According to HT	Martensitic stainless steel
420	0.20	0.5	13	-	-	0.5		bal.	1.4021		
FE12V	2.8	1.0	7.0	-	1.5	-	V: 12	bal.			
WD54	1.2	-	4.0	-	5.0	-	W: 5.5 V: 3.0	bal.	HSS: AISI M 3	800 HV According to HT	High abrasive and wear resistance
WD91	1.0	-	3.8	-	8.5	-	W: 2.0 V: 2.0	bal.	HSS: 1.3348 - AISI M 7		
FE23C	2.0	1.5	26	10	5.0	-		bal.	SAE S 68000	350 HV	High corrosion and oxidation resistance

Nickel base super-alloys

COGNE Grade	C	Si	Cr	Fe	Mo	Nb	Others	Ni	Commercial grade	Properties	
IN600	< 0.1	-	16	8.0	-	-		bal.	Inconel 600 – 2.4816	170 HV	Good resistance to oxidation and corrosion at high temperatures
IN625	< 0.1	1.0	22	< 5.0	9.0	3.5	Ti: < 0.4 Al: < 0.4	bal.	Inconel 625 – 2.4856	200 HV	
IN825	< 0.03	< 0.5	21	30	3.0	-	Ti: 1.0	bal.	Incoloy 825 – 2.4858	155 HV	High resistance to both reducing and oxidizing acids
C22	< 0.02	< 0.08	22	4.0	13	W: 3.0	V: < 0.35 Co: < 2.5	bal.	Hastelloy C22** – 2.4602	180 HV	High resistance to oxidation and corrosion (pitting and stresscorrosion cracking)
C276	< 0.01	< 0.08	15	5.0	16	W: 4.0	V: < 0.35 Co: < 2.5	bal.	Hastelloy C276** – 2.4819	180 HV	

Nickel base alloys

COGNE Grade	C	Si	B	Cr	Fe	Ni	Properties
NP20	< 0.2	2.5	1.5	-	< 1.0	bal.	240 HV
NP25	< 0.5	2.5	1.7	-	< 1.0	bal.	280 HV
NI35	0.3	3.5	1.3	6.0	2.0	bal.	350 HV
NI40	0.25	3.5	1.6	7.5	2.5	bal.	420 HV
NI50	0.45	3.8	2.3	11	2.5	bal.	600 HV
NI60	1.0	4.0	3.2	15	4.0	bal.	700 HV

Self fluxing alloys with low hardness and easy to machine; suitable to build up moulds

Self fluxing alloys with good wear and corrosion resistance. Excellent fluidity, suitable to build up moulds

High hardness alloys with very good wear and corrosion resistance even at elevated operating temperatures

Copper base alloys

COGNE Grade	C	Si	Al	Ni	Fe	Cu	Properties
CU85	< 0.01	< 0.1	10	5.0	1.0	bal.	High frictional and wear resistance
CU90	< 0.01	< 0.1	10	5.0	1.0	bal.	

Acero para Válvulas Automotrices

Automotive valve steel

Our quality focused on our customer

CAS Safety Policy:

- 1) Safety management manual
- 2) Prevention policy of relevant accidents and fires
- 3) Plant general rescue plan

Our quality and R&D service has the responsibility of guaranteeing that Cogne products respond to both the most demanding International Standards and to each customer's individual specifications. Our company is certified according ISO 9001:2008; ISO/TS 16949:2009; ISO14001:2004. Our goal is the continuous improvement of our products, the complete satisfaction of our customers and the constant search for competitive advantage on a global scale. Our search for innovative solutions and the promotion of a customer-orientated Company Culture lead us to develop the following:

- Customer service
- Metallurgical process control
- Laboratory and testing
- Research and Development
- Quality Certification
- Customer homologation



Este producto es ideal para las siguientes industrias
This product is ideal for the following industries



Automotriz
Automotive



Naval
Naval

Our Dashboard

Quality in every step of the way



Melting

High purity
Microcleannes

Macrostructure online control



Rolling & heat
treatment

Product defectivity online control
Heat treatment diagram control



Finishing

Peeling, Drawing & Grinding
Magnetic annealing treatment
Mechanical characteristic control



Final
inspection

Dimensional laser control
Magnatest
Eddy current testing machine
US testing
Final approval

Production programme

Grade	C	Si	Mn	P	S	Cr	Mo	Ni	Nb	W	N ₂	Annealed HRC	Hardened & tempered HRC	EN 10090	SAE	JIS	Others
VA34	0.28-0.38	0.5-1.0	1.5-3.5	≤0.050	≤0.030	22-24	≤0.5	7.0-9.0		≤0.5	0.25-0.35	≤38		1.4866	X33CrNiMnN23.8	EV16	23-8N
VA61	0.48-0.58	≤0.45	8-10	≤0.050	≤0.030	20-22		3.25-4.5			0.35-0.50	≤40		1.4871	X53CrMnNiN21.9	EV8	SUH35 21-4N
VA66/2	0.5-0.6	≤0.25	7-10	≤0.050	≤0.030	19.5-21.5		1.5-2.75			0.20-0.40	≤40		1.4875	X55CrMnNiN21.9	EV12	21-2N
VA63	0.45-0.55	≤0.45	8-10	≤0.050	≤0.030	20-22		3.5-5.5	1.8-2.5	0.8-1.5	0.40-0.60	≤40		1.4882	X50CrMnNiNbN21.9	EV8NbW	21-4NWNb
VM09	0.45-0.55	1.0-2.0	≤0.60	≤0.030	≤0.030	7.5-9.5		≤0.50				≤30	30-35		X50CrS8.2		SUH11
VM11	0.40-0.50	2.7-3.3	≤0.80	≤0.040	≤0.030	8.0-10.0		≤0.50				≤30	30-35/ 35-43	1.4718	X45CrS9.3	HNW3	SUH1
VM12D/1	0.35-0.45	2.0-3.0	≤0.80	≤0.040	≤0.030	9.0-11.0	0.8-1.3					≤30	30-35	1.4731	X40CrSiMo10.2		SUH3

CAS Products for automotive



Braking Systems

Anti-lock braking solenoids

Exhaust Systems

Catalytic
(Welding wire, wool wire, wire for support rings and bars for fixing elements)



Safety

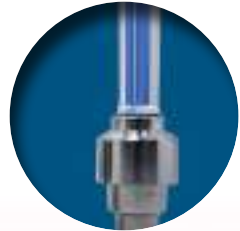
Windshield wipers
(Support wire)

Airbag
(Bars for cartridge And knitted wire)

Cruise control

Abs and ride Control Solenoids

Pressure sensors



Engine management

Fuel injectors

Engine valves

Oxygen sensors fuel

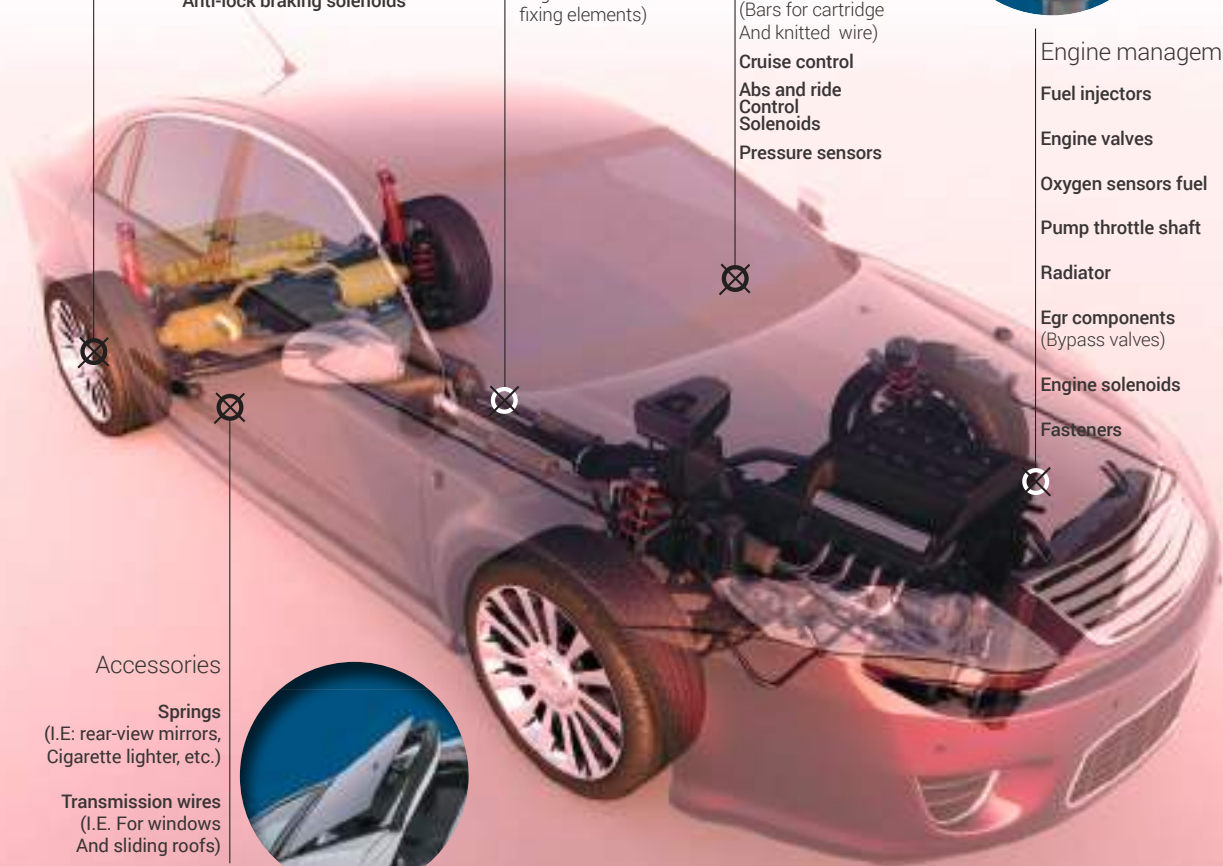
Pump throttle shaft

Radiator

Egr components
(Bypass valves)

Engine solenoids

Fasteners



Accessories

Springs
(I.E. rear-view mirrors, Cigarette lighter, etc.)

Transmission wires
(I.E. For windows And sliding roofs)



Alambrón

Wire rod

Size range

Rounds Diameters from 5.50 to 32.0 mm
Hexagons Keys from 13.0 to 28.5 mm

Tolerances

Diameter	Standard tolerance	Extra standard tolerance
5,50 - 10,0 mm	+/- 0,20 mm	+/- 0,15 mm
>10,0 - 15,0 mm	+/- 0,25 mm	+/- 0,20 mm
>15,0 - 21,5 mm	+/- 0,30 mm	+/- 0,25 mm
22,0 - 32,0 mm	+/- 0,35 mm	+/- 0,30 mm

cut of roundness	80 % of the range of tolerance	60 % of the range of tolerance
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Heat treatment

According to each steel category, wire rod is supplied in the following conditions:

- Annealing (RS) for austenitic, (RL) for martensitic duplex and precipitation hardened martensitic steels.
- Recrystallization annealing (RR) for ferritic steels.
- Globulization annealing (RG) or hardening and tempering (BN) for martensitic steels.

Surface condition

Wire rod is pickled or, if required, for particular end uses, sand blasted and pickled. On customer's request wire rod can also be covered with salts for drawing.

Dimensions and weight of coils

Inner diameter About 850 mm
Outer diameter = About 1300 mm
Weight 1000 - 1400 kg.

Certification

Test certificates comply with Euronorm EN 10204 3.1: last revision and Euronorm EN 10088 for technical data; the compliance with other standards or specifications must be agreed upon requests.



Packaging

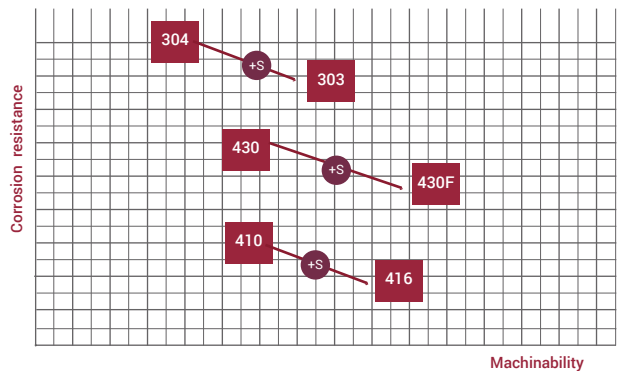
Each coil is bound with four plastic strips and labelled with an identification tag reporting the following information:

Customer, order n°, Cogne grade, grade denomination according to customer's specifications or to the required standard, nominal size, heat n°, lot n°, coil n°, net weight in Kg.

On customer's request plastic wrapping of each coil is available.

Improved machinability steels

A better machinability for stainless steels is obtained by adding sulphur or processing liquid steel with sulphur and calcium. The following diagrams show the effect of both methods on corrosion resistance.



Effect of sulphur addition on corrosion and machinability

Este producto es ideal para las siguientes industrias / This product is ideal for the following industries



Alimenticia
Food



Automotriz
Automotive



Aeroespacial
Aerospace



Construcción
Construction



Médica
Medical



Petrolera
Oil & Gas



Energética
Energy



Naval
Naval



Química
Chemical



Textil
Textile





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