



Cogne Acciai Speciali

Leader in stainless steel and nickel alloy long products

TS

Wire rod

Stainless steel wire rod



SIZE RANGE

ROUNDS diameters from 5.50 to 31.5 mm

HEXAGONS keys from 13.0 to 28.5 mm

TOLERANCES

Material provided with dimensional tolerances according to EN 10108 standard class A, evaluable extra standard tolerance class B

DIAMETER	STANDARD TOLERANCE
5,50 - 10,0 mm	+/- 0,20 mm
>10,0 - 15,0 mm	+/- 0,25 mm
>15,0 - 21,5 mm	+/- 0,30 mm
22,0 - 32,0 mm	+/- 0,35 mm
out of roundness of tolerance	80% of the range of tolerance

QUALITY, ENVIRONMENTAL AND SAFETY MANAGEMENT SYSTEM, PROCESS ACCREDITATION AND PRODUCT CERTIFICATION

Customer Satisfaction is part of Cogne Acciai Speciali Mission; therefore the Quality Management System has been designed according to different Standards to which Cogne Acciai Speciali is complying: UNI EN ISO 9001:2015, IATF 16949:2016 and UNI EN 9100:2018. In addition, Cogne Acciai Speciali Environmental and Safety System are certified according respectively to UNI EN ISO 14001:2015 and UNI ISO 45001:2018. Cogne Acciai Speciali is accredited according to NADCAP for heat treatment as well as to ASME NCA 3800 – Part III for nuclear productions and the Chemical Laboratory is accredited according to UNI CEI EN ISO/IEC 17025:2018.

For all detail related please refer to:

www.cogne.com/en/qualita/

Test certificates comply with Euronorm EN 10204 3.1 (last revision) and Euronorm EN 10088 for technical data.

HEAT TREATMENT

According to each steel category, wire rod is supplied

in the following conditions:

- **Solution annealing** (RS) for austenitic, duplex and precipitation hardening (+AT cond.) SS;
- **Recrystallization annealing** (RR) for ferritic SS;
- **Globulization annealing** (RG) for hardening martensitic (+A cond.) SS;
- **Quenching and tempering** (BN) for martensitic (+QT cond.)
- **Precipitation hardening** (SI) for precipitation H (+P cond.) SS.

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 or special coating for rust inhibition during sea transport. Material provided maximum surface defects depth according to EN 10263-5

DIMENSIONS AND WEIGHT OF COILS

Height Max 1200 mm -47, 24 in

Weight of Coil Max 1300 kg- 2866 LB

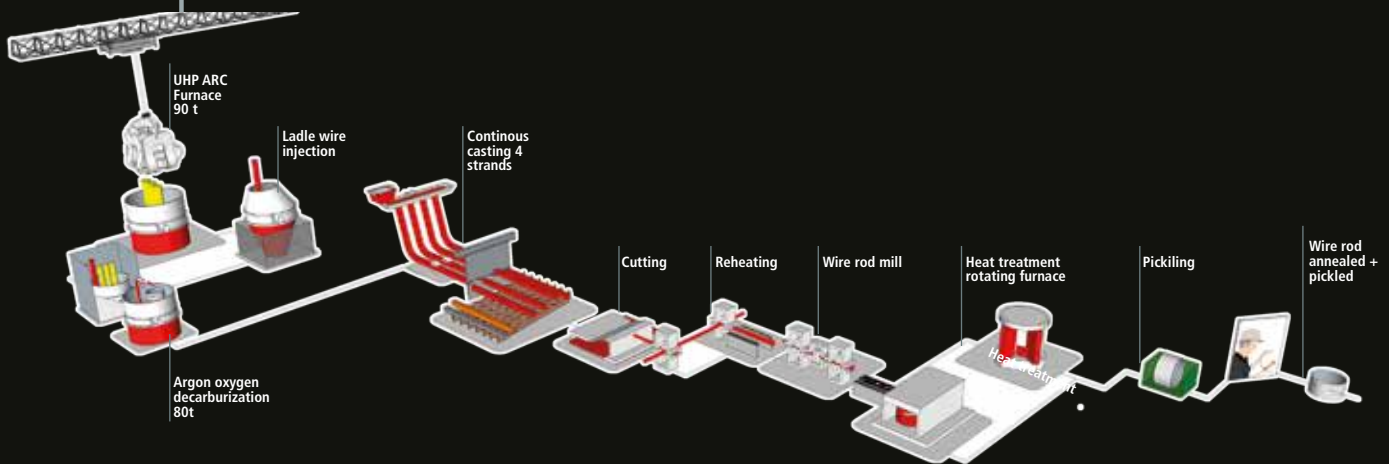
Maximum external coil size 1300 mm -51,18 IN

Inside Diameter of Coil Min. 850 mm-33,46 IN

PACKAGING

Each coil is bound with three 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.

Production process



PRODUCTION PROCESS

Cogne Acciai Speciali produces high quality stainless steels and alloys, taking advantage of its long-lasting experience in this field and giving scope to constant technological innovation. Cogne offers the best support and service to its customers, as well as a wide product range and always aims at supplying the most varied using sectors, following the main international standards. The new and reliable continuous production lines that have been installed due to recent investments enable C.A.S to supply high quality wire rod with an exhaustive dimensional range.

QUALITY IN CUSTOMER SERVICE

Product certification is guaranteed at each material supply. In addition to the common dimension and general features that are usually mentioned on test certificates, further chemical analysis, mechanical properties, structural and durability characteristics can be also provided according to the customer's requirements.

Other specific tests can be achieved upon request by COGNE Laboratory that follows up production processes improvement and products quality development. The Laboratory remains, of course, at complete disposal of customers for personal advise: the technicians of C.A.S Customer Service are always ready to provide the useful technical and metallurgical guidance to an appropriate product choice, as well as the requested tests and samples.



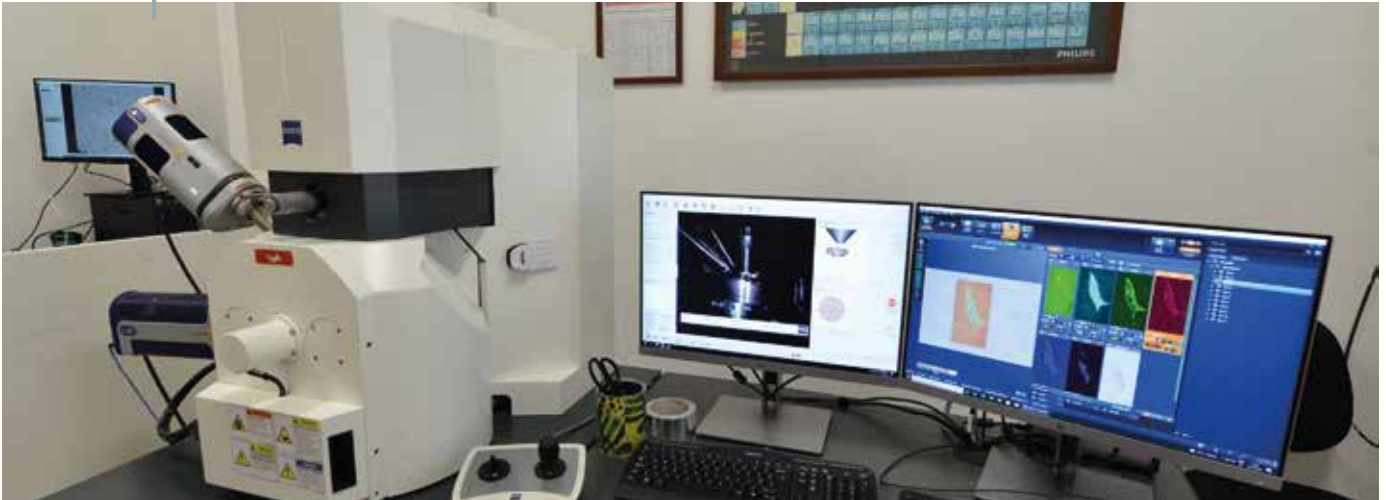
Stainless steel wire rod

EN10088	Cogne Grade	C	S	Cr	Ni	Mo	N	Cu	other	Rm (MPa)
										min-max
COLD HEADINGS										
1.4567	304K	≤ 0,04	≤ 0,03	17,00/19,00	8,5/10,5		≤ 0,1	3,00/4,00		450/650
1.4567	304K 2	≤ 0,04	≤ 0,03	17,00/19,00	9/10,5		≤ 0,1	3,00/4,00		450/650
1.4404	316RH	≤ 0,03	≤ 0,03	16,5/18,5	10,00/13,00	2/2,5	≤ 0,1			500/700
1.4307	304/2	≤ 0,030	≤ 0,03	17,5/19,5	8,00/10,50		≤ 0,1			500/700
1.4404	316L4	≤ 0,030	≤ 0,03	16,5/18,5	10,00/13,00	2/2,5	≤ 0,1			500/700
1.4578	316K	≤ 0,04	≤ 0,015	16,5/17,5	10,00/11,00	2/2,5	≤ 0,11	3,00/3,50		450/650
1.4016	430L/2	≤ 0,08	≤ 0,03	16,00/18,00	≤ 0,50					400/630
SPRING WIRE										
1.4310	302/4	0,05-0,15	≤ 0,015	16,00/19,00	6,00/9,50	≤ 0,8	≤ 0,1			500/750
DRAWN WIRE										
1.4307	304/4	≤ 0,030	≤ 0,015	17,5/19,5	8,00/10,50		≤ 0,1			500/700
1.4301	304/6	≤ 0,070	≤ 0,015	17,5/19,5	8,00/10,50		≤ 0,1			500/700
1.4401	316/3	≤ 0,070	≤ 0,015	16,50/18,50	10,00/13,00	2,00/2,50	≤ 0,1			500/700
1.4404	316L	≤ 0,030	≤ 0,015	16,50/18,50	10,00/13,00	2,00/2,50	≤ 0,1			500/700
1.4571	316T	≤ 0,080	≤ 0,015	16,50/18,50	10,50/13,50	2,00/2,50			Ti 5XC/0,70	500/700
1.4541	321	≤ 0,080	≤ 0,015	17,00/19,00	9,00/12,00				Ti 5XC/0,70	500/700
1.4016	430/1	≤ 0,080	≤ 0,015	16,00/18,00						400/630
1.4113	434/3	≤ 0,080	≤ 0,015	16,00/18,00		0,90/1,40				440/660
1.4362	324	≤ 0,030	≤ 0,015	22,00/24,00	3,50/5,50	0,10/0,60	0,05/0,20	0,10/0,60		600/850
HEAT RESISTANT										
1.4828	309SI	≤ 0,20	≤ 0,015	19,00/21,00	11,00/13,00		≤ 0,10			500/700
1.4845	310/1	≤ 0,10	≤ 0,015	24,00/26,00	19,00/22,00		≤ 0,10		Si max 1,5	500/700
IMPROVED MACHINABILITY										
1.4305	303	≤ 0,10	0,15/0,30	17,00/19,00	8,00/10,00		≤ 0,10			500/750
1.4570	303K	≤ 0,08	0,15/0,35	17,00/19,00	8,00/10,00	≤ 0,60	≤ 0,10	1,40/1,80		500/700
SUS303Cu	303SK	≤ 0,15	≥ 0,15	17,00-19,00	8,00/10,00	≤ 0,60		1,5-3,5		500/700
1.4307	F304L/1	≤ 0,030	0,015/0,030	17,5/19,5	8,00/10,50		≤ 0,1			500/700
1.4404	F316L	≤ 0,030	0,015/0,030	16,50/18,50	10,00/13,00	2,00/2,50	≤ 0,1			500/700
1.4598	316LK	≤ 0,030	0,10/0,20	16,50/18,50	10,00/13,00	2,00/2,50	≤ 0,1	1,30/1,80		500/700
1.4571	316T/1	≤ 0,080	0,015/0,030	16,50/18,50	10,50/13,50	2,00/2,50			Ti 5XC/0,70	500/700
1.4541	321/3	≤ 0,080	0,015/0,030	17,00/19,00	9,00/12,00				Ti 5XC/0,70	500/700
1.4105	430F/6	≤ 0,080	0,15/0,35	16,00/18,00		0,20/0,60				430/630
1.4006	410/6	0,08/0,15	0,015/0,030	11,50/13,50	≤ 0,75					≤ 730
1.4005	416/1	0,08/0,15	0,15/0,35	12,00/14,00		≤ 0,60				≤ 730
AISI 416	416/3	0,08/0,15	0,35-0,45	12,00/14,00		≤ 0,60				≤ 730
1.4021	420A/7	0,16/0,25	0,015/0,030	12,00/14,00						≤ 760
1.4028	420B/4	0,26/0,35	0,015/0,030	12,00/14,00						≤ 800
1.4034	420C/4	0,43/0,50	0,015/0,030	12,50/14,50						≤ 800
1.4035	420CF	0,43/0,50	0,15/0,35	12,50/14,00						≤ 800
1.4104	430F/3	0,10/0,17	0,15/0,35	15,50/17,50		0,20/0,60				≤ 730
1.4057	431/1	0,12/0,22	0,015/0,030	15,00/17,00						≤ 950
High hardness and wear resistance										
1.4028	420B	0,26/0,35	≤ 0,015	12,00/14,00						≤ 800
1.4034	420C/1	0,43/0,50	≤ 0,015	12,50/14,50						≤ 800
1.4037	420D2	0,58-0,70	≤ 0,015	12,50/14,50						≤ 800
1.4112	440B	0,85/0,95	≤ 0,015	17,00/19,00		0,90/1,30			V 0,07/0,12	≤ 900
1.4125	440C/2	0,95/1,20	≤ 0,015	16,00/18,00		0,40/0,80				≤ 950
Drawn wire-high hardness and wear resistance										
1.4542 (17-4 PH)	630S	≤ 0,070	0,015/0,030	15,00/17,00	3,00/5,00	≤ 0,60		3,00/5,00	Nb 5xC/0,45	≤ 1200
High corrosion resistance										
1.4462	329A 1	≤ 0,030	≤ 0,015	21/23	4,50/6,50	2,50/3,50	0,10/0,22			850/1150
Fe-Ni alloys and Ni alloys for high temperature service										
1.4980	SF286	0,03/0,08	≤ 0,015	13,50/16,00	24,00/27,00	1,00/1,5			V:0,1/0,5, Ti:1,90/2,3	≤ 700
2.4858	SN825	≤ 0,025	≤ 0,015	19,50/23,50	38,00/46,00	2,50/3,50		1,50/3,00	Co ≤ 1, Ti:0,60/1,2	≤ 800
Medichal										
1.4441	316LM1	≤ 0,030	≤ 0,010	17,00/19,00	13,00/15,50	2,50/3,20	≤ 0,100	≤ 0,50		500/750
Watch industry										
1.4441	316LMW	≤ 0,030	≤ 0,010	17,00/19,00	13,00/15,50	2,50/3,20	≤ 0,100	≤ 0,50		500/750

WELDING

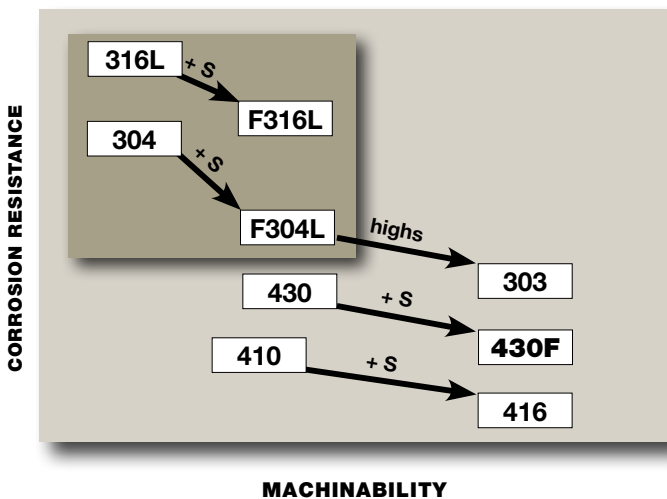
Cogne Acciai Speciali's grades comply with the international standards and are suitable for numerous welding applications such as: MIG TIG, SUBMRGEDE ARC, SPRAYING WELDING, CORE WIRE FOR ELECTRODES. All the steels are produced in electric arc furnace with highly selected raw materials and strictly controlled melting, refining and casting practices in order to ensure extra low impurity levels and narrow ranges of required elements. All materials are produced for high drawing speed and excellent welding. All welding grades are produced according to AWS A5.9-A5.4, EN ISO 14343, Euronorm EN 10088, DIN 8514. Other particular chemical compositions according to customer specifications can be achieved.

Stainless steel wire rod



IMPROVED MACHINABILITY STEELS

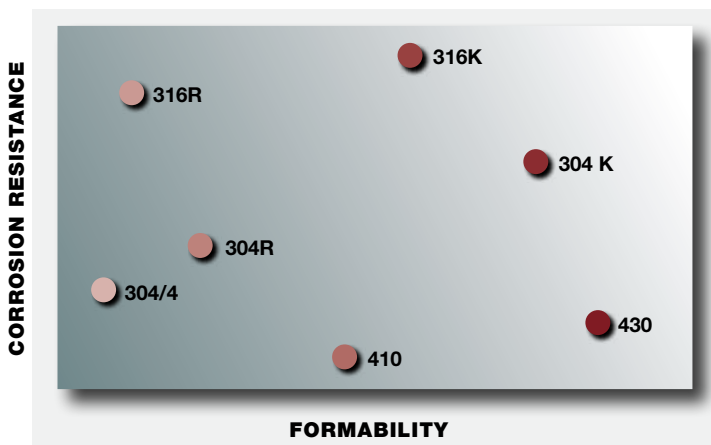
Addition of Sulphur and/or Calcium



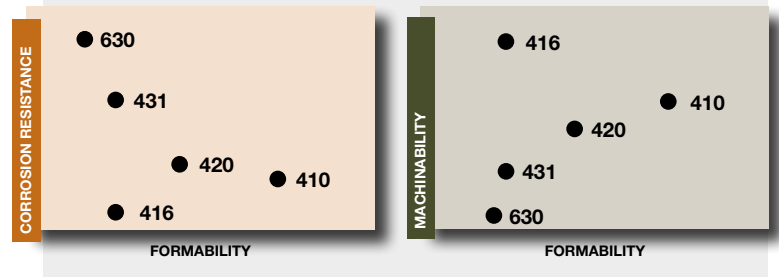
Effect of sulphur addition on corrosion and machinability

STEELS FOR FASTENERS AND COLD-HEADING

Compromise between:
plastic cold-deformation and corrosion resistance.



MARTENSITICS



MARTENSITIC STAINLESS STEELS

Heat treatment of quenching and tempering in order to acquire appropriate mechanical properties as a consequence of both heat treatment and chemical composition. Corrosion resistance, good at $T \geq 500^\circ\text{C}$, is lower than for ferritic and austenitic grades and directly related to increasing chromium and decreasing carbon contents, Good corrosion resistance in relatively mild corrosive environment, (fresh water, food, neutral salts, certain organic acids, cold diluted nitric acid) Brittle below 0°C Machinability of these grades is somewhat lower as compared with non-alloyed steels with the same hardness levels.

STAINLESS STEEL FOR SPRINGS

Austenitic stainless steels hardened by cold working. Increased elastic limit and tensile properties spring steels require an optimum analysis balance to achieve the maximum work hardening degree.

Sales and distribution offices

AMERICAS

BRAZIL
METALINOX COGNE AÇOS
INOXIDÁVEIS ESPECIAIS
 Av. Presidente Wilson, 4382
 04220-001 São Paulo
 Tel. +55 11 21019000
 Fax +55 11 21019043
sales.brazil@cogne.com

MEXICO
COGNE MÉXICO
 Huamantla City
 Av. Otomías S/N
 Parque Industrial Xicohténcatl II
 90500 Huamantla, Tlaxcala
 Tel. 01 800 700 2015
sales.mexico@cogne.com

U.S.A
COGNE SPECIALTY STEEL USA
 277 Fairfield Road - STE 315
 Fairfield, NJ 07004
 Tel. +1 (212) 7852456
 Fax +1 (973) 2271442
sales.usa@cogne.com

ASIA

CHINA
DONG GUAN COGNE
STEEL PRODUCTS
 Wei Jian Road, Industrial park of
 ChaShan, ChaShan town
 DongGuan City, Guang Dong province
 Tel. +86 769 85417742
 Fax +86 769 85417741
sales.china@cogne.com

COGNE HONG KONG
 Level 54, Hopewell Centre
 183 Queen's Road East
 Hong Kong
sales.china.south@cogne.com

COGNE SHANGHAI
 Room 4005&4026,4/f, Central Place,
 no.16 South Henan Road
 Huangpu district
 Shanghai 200002
sales.china.north@cogne.com

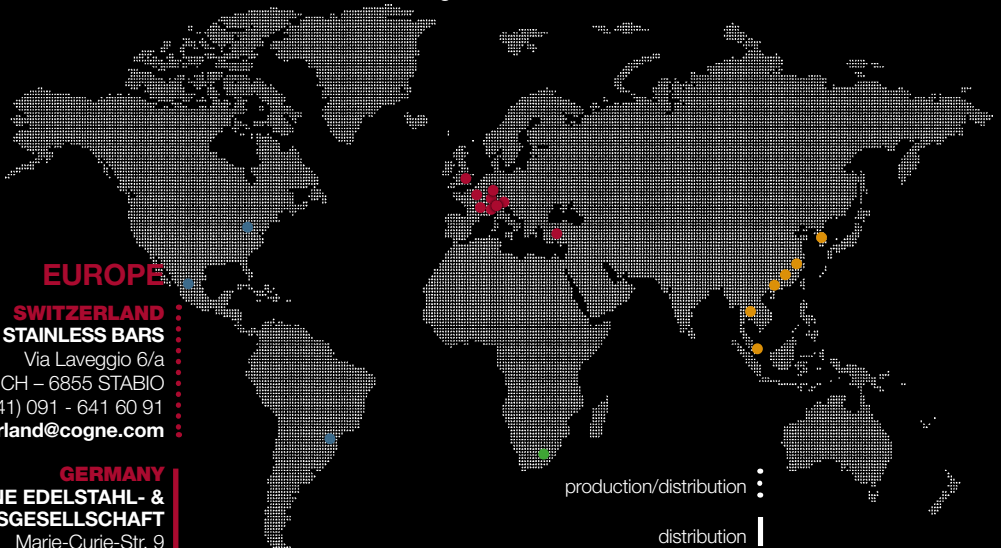
KOREA
COGNE KOREA
SEOUL HEAD OFFICE
 #1027, 10, Bamgogae-ro 1-gil,
 Gangnam-gu, Seoul
 Tel. +82-2-451-4510
 Fax. +82-2-451-4630
sales.korea@cogne.com

SIHWA WAREHOUSE
 Steel land 608, 609,
 21, Oido-ro, Siheung-si, Gyeonggi-do
 Tel. +82-31-8041-4631
 Fax. +82-31-80414630

SINGAPORE
COGNE SINGAPORE
 160 Robinson Road
 #14-04, SBF Centre
 Singapore 068914
 Tel. +65-9146 5603
sales.singapore@cogne.com

THAILAND
COGNE ACCIAI SPECIALI THAILAND
REPRESENTATIVE OFFICE
 Tel. (0066) 61 1955 648 / 61 5255 911
sales.thailand@cogne.com

AFRICA
SOUTH AFRICA
COGNE SOUTH AFRICA
 Napper Road
 Wadeville Ext.2
 Germiston
sales.s.africa@cogne.com



EUROPE

SWITZERLAND
COGNE STAINLESS BARS
 Via Laveggio 6/a
 CH - 6855 STABIO
 Tel. (+41) 091 - 641 60 91
sales.switzerland@cogne.com

GERMANY
COGNE EDELSTAHL - &
METALLHANDELSGESELLSCHAFT
 Marie-Curie-Str. 9
 28816 Stuhr - Brinkum
 Tel. +49 (0) 421 56542 - 0
 Fax + 49 (0) 421 56542 - 22
edelstahl@emb-stuhr.de
www.emb-stuhr.de

COGNE EDELSTAHL
HEAD OFFICE AND SALES NORTH
 Carl-Schurz-Strasse 2
 41460 Neuss
 Tel. +49 (0)2131 1246 0
 Fax +49 (0)2131 1246 159
sales.germany@cogne.com

WAREHOUSE
AND SALES SOUTH
 Siemensstrasse 31-33
 71254 Ditzingen
 Tel. +49 (0)7156 92 72 98 0
 Fax +49 (0)7156 92 72 98 9
sales.germany@cogne.com

ITALY
COGNE ACCIAI SPECIALI
 Via Pitagora, 3
 20010 Cornaredo (MI)
 Tel. +39 02 93 48 101
 Fax +39 02 93 56 61 26
deposito.cornaredo@cogne.com

COGNE ACCIAI SPECIALI
 Via Stazione, 80
 30035 Mirano
 (Fraz. di Ballò di Mirano) Venezia (VE)
 Tel. +39 041 41 40 55
 Fax +39 041 46 47 54
deposito.venezia@cogne.com

FRANCE
COGNE FRANCE
 16, rue de la Patelle
 ZA des Bellevues - Eragny
 F-95600 Cergy Pontoise
 Tel. +33(0) 1 39093434
 Fax +33(0) 1 39093435
sales.france@cogne.com

LYON
 15, rue des frères Lumière
 69680 Chassieu
 Tel. +33(0) 4 72476474
 Fax +33(0) 4 78908594
sales.france@cogne.com

TURKEY
COGNE ÇELIK
 Sultan Orhan Mah. Keresteciler
 Sanayi Sitesi
 2003 Blok No:1 Gebze/Kocaeli
 Tel. (262) 6431733 (Pbx)
 Fax (262) 6429541
sales.turkey@cogne.com

UNITED KINGDOM
COGNE UK
 Head Office - Sales & Warehouse
 Uniformity Steel Works
 19 Don Road
 Newhall Sheffield S9 2UD
 Tel. +44 (0)114 2212020
 Fax +44 (0)114 2213030
sales.uk@cogne.com

in cogne-acciai-speciali-spa

Contact



CENTRAL SALES OFFICES

Cogne Acciai Speciali s.p.a.

Via Paravera, 16 - 11100 AOSTA
 Tel. +39 0165 30 21 (central switchboard)
 Fax +39 0165 43 833

For further technical and commercial informations:

www.cogne.com