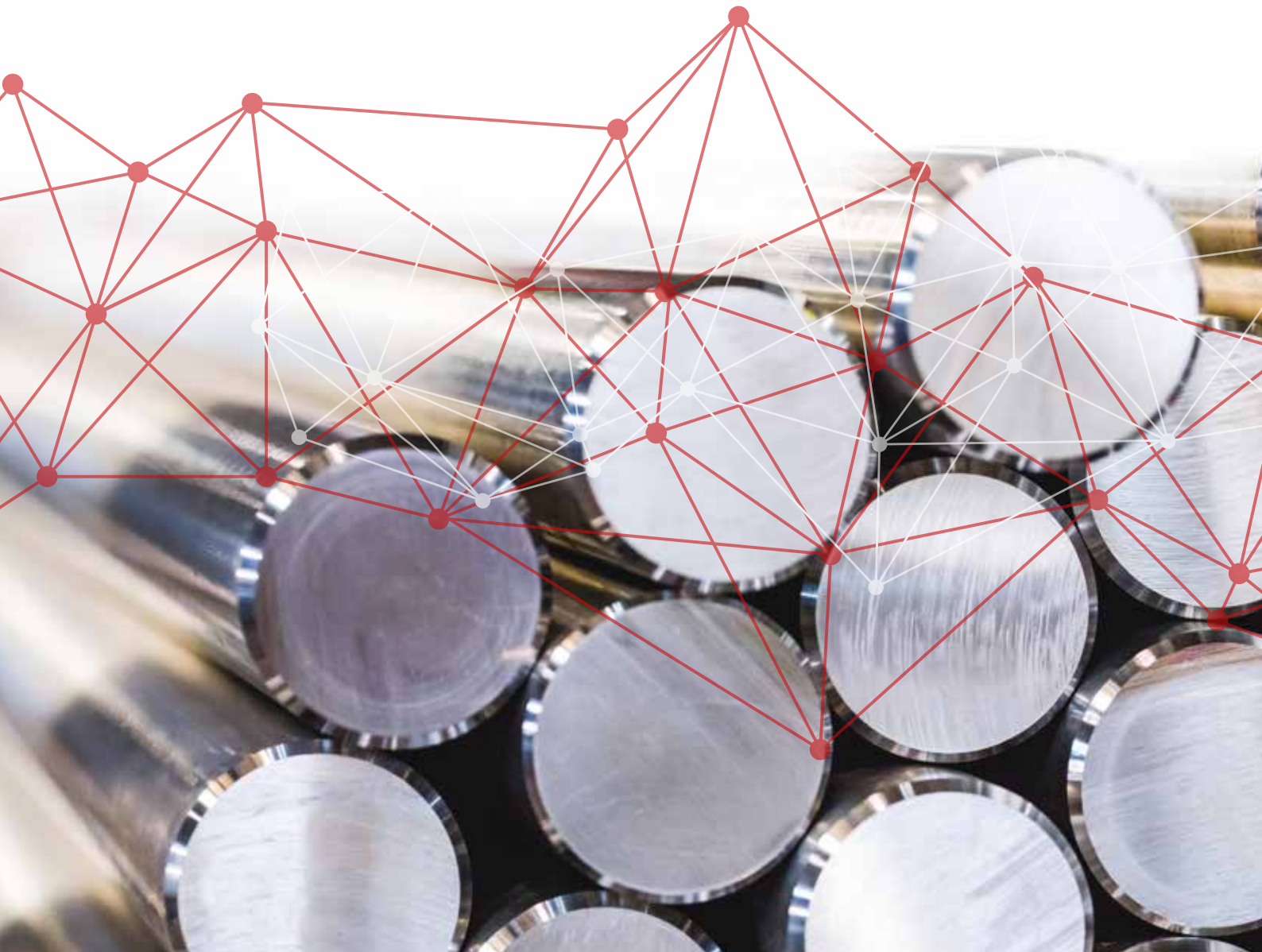


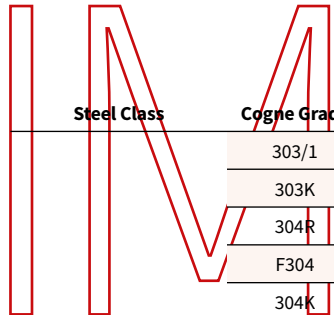


Cogne Acciai Speciali Group

Stainless Steel Bars

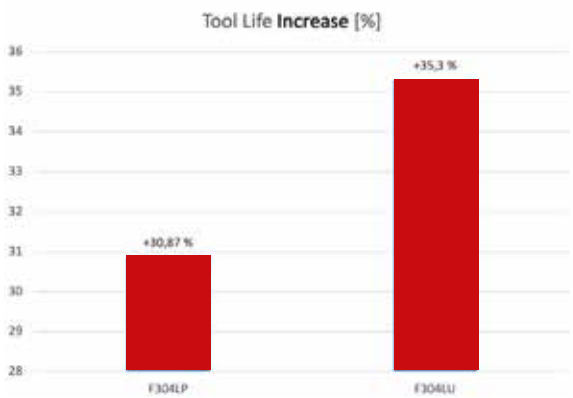
Improved **M**achinability **CO**gne - IMCO[®]





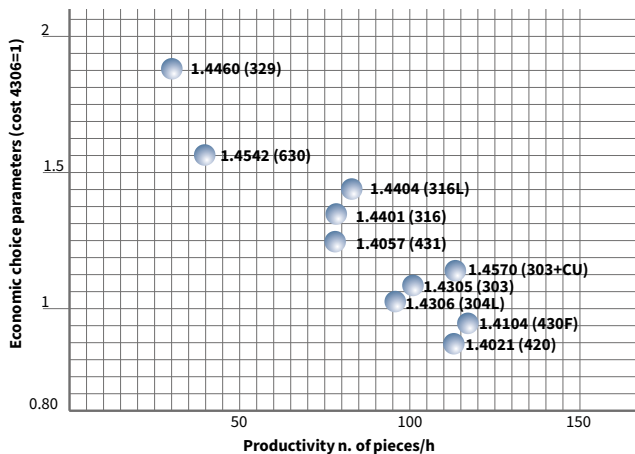
| Steel Class | Cogne Grade | Improved machinability | EN/DIN/UNI | W.N. | BS | SIS (SWEDEN) | AISI/ASTM/ASME |
|--------------------------------|-------------|------------------------|----------------------|--------|---------|--------------|----------------|
| Austenitic grades | 303/1 | IMCO* | X8CrNiS 18-9 | 1.4305 | 303S31 | 2346 | 303 8F B8F |
| | 303K | IMCO* | X6CrNiCuS 18-9-2 | 1.4570 | | | |
| | 304R | | X2CrNi 19-11 | 1.4306 | 304S12 | 2352 | 304 L |
| | F304 | IMCO* | X5CrNi 18-10 | 1.4301 | 304S31 | 2333 | 304 B8 |
| | 304K | | X3CrNiCu 18-9-4 | 1.4567 | 394S17 | | 304 Cu |
| | F304L | IMCO* | X2CrNi 19-11 | 1.4306 | 304S12 | 2352 | 304 L |
| | F304LP | IMCO* | X2CrNi18-9 | 1.4307 | 304S11 | 304L | |
| | F304LU | IMCO* | X2CrNi18-9 | 1.4307 | 304S11 | 304L | |
| | F316L9 | IMCO* | X5CrNiMo17-12-2 | 1.4404 | 316S11 | 316L | |
| | 309Si | | X15CrNiSi 20-12 | 1.4828 | 309S24 | | 309 |
| | F316 | IMCO* | X5CrNiMo 17-12-2 | 1.4401 | 316S31 | 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* | X6CrNiTi 18-10 | 1.4541 | 321S31 | | 321 |
| Martensitic grades | 410/2 | | X12Cr13 | 1.4006 | 410S21 | 2302 | 410 |
| | 410/6 | 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 | | | |
| | 430F/3 | IMCO* | X14CrMoS17 | 1.4104 | | 2383 | 430F |
| | 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/6 | IMCO* | 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 | | X2CrNiMoCuWN 25-7-4 | 1.4501 | | | F55 |
| | 329S/1 | | X2CrNiMoN 25-7-4 | 1.4410 | | | F53 Cr25 |
| Heat resisting grades | 310/1 | | X8CrNi 25-21 | 1.4845 | 310S31 | 2361 | 310 S |
| | 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 |
| Superalloy grades | 904L | | X1NiCrMoCu 25-20-5 | 1.4539 | 904S13 | 2652 | 904L |

| | ROUND BARS | | | | | | HEXAGONS BARS |
|----------------------------------|-----------------|----------------|---------------|---------------------|----------------------------------|-------------------|----------------|
| | Peeled & Reeled | Rough peeled | Turned | Cold drawn polished | Peeled & Polished (rough ground) | Centreless ground | Cold drawn |
| Size | 20-101,60mm | 102-390mm | 391-600mm | 4,00-25,4mm | 20-80mm | 4-80mm | 11-27 mm |
| (mm & inches) | 0.787"- 4" | <4.0"- 15.354" | <15.4"- 26.5" | 0.157"- 1" | 0.787"- 3.150" | 0.157"- 3.150" | 0.433"- 1.063" |
| Tolerances | k11-h10 | DIN 1013 | DIN 1013 | h9 | h9 | h9-h8-h7 | h11 |
| | DIN EN 10278 | | | DIN EN 10278 | DIN EN 10278 | DIN EN 10278 | |
| Standard length (mm & inches) | 3000-3100mm | 4000-6200mm | 3000-6000mm | 4000-6200mm | 4000-6200mm | 4000-6200mm | 4000-6200mm |
| | 6000-6200mm | 12' ≈ 14' | 10' ≈ 20" | 12' ≈ 14' | 12' ≈ 14' | 12' ≈ 14' | 12' ≈ 14' |
| | 12' ≈ 4" | 20' ≈ 22' | | 20' ≈ 22' | 20' ≈ 22' | 20' ≈ 22' | 20' ≈ 22' |
| | 20' ≈ 4" | | | | | | |
| Bundle weight | 1000Kg | 1000Kg One bar | One bar | 500kg | 1000kg | 500kg | 500kg |



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.



Bars

Cogne stainless steel bars are suitable for all the application technologies, and are produced as rounds and hexagons.

The production line, made up of accurate manufacturing cycles and alloy refining in the steel plant, includes hot (rolling and forging) or cold transformations (peeling and cold drawing). The latter is especially indicated when seeking for high mechanical characteristics.

Particular finishing processes such as grinding make it possible to produce defect-free surfaces: a further finishing level can be reached through mechanical polishing, thereby improving the aesthetics of the product (i.e.: bright bars).

The different sorts of traditional stainless steels – austenitics, ferritics martensitics – are produced to meet the needs of hot and cold deformation and of corrosion or high temperature hot oxidation resistance.

Besides, a particular quality, IMCO® (Improved Machinability Cogne), has been developed to improve machinability on high speed and automatic tool machines of the bar itself.

Advanced stainless steels complete Cogne's production range with duplex and superduplex, precipitation hardening, superaustenitic steels and refractory stainless steels, created to resist at high temperatures and/or in very aggressive environments.

OUR DASHBOARD Quality... every step of the way



MELTING

Taylor made Chemical analysis
Casting/Pouring parameters control



ROLLING & FORGING

Product defectivity online control



FINISHING & FINAL INSPECTION

Peeling (+reeling)



One Cogne: channeling the power of together to create a better future.

Cogne Acciai Speciali renews and forges its commitment towards people, the environment, its local community and respect for human rights.



Discover
Cogné World



- PRODUCTION & DISTRIBUTION
- DISTRIBUTION

Headquarter



Cogné Acciai Speciali Group

AOSTA - Italy

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