

STANDARD REFERENCE:
EN 10088-3: 2005 (Hot-rolled and bright products)

RODACCIAI REFERENCES AND COMPARABLE STANDARDS

EUROPE		ITALY	GERMANY		FRANCE	UK	USA
EN 10088-3: 2005		(UNI 6900: 71)	(DIN 17440 - 85)		(NF A 35-574-90)	(BS 970 pt. 3-91)	AISI
Grade	N°		Werkstoff	N°			
X17CrNi16-2	1.4057	X 16 CrNi 16	X17CrNi16-2	1.4057	Z 15 CN 16 - 02	431S29	431

CHEMICAL COMPOSITION (CAST ANALYSIS) (%)

C	Si / max	Mn / max	P / max	S / max	Cr	Ni
0,12÷0,22	1,00	1,50	0,040	0,030	15,0÷17,0	1,50÷2,50

MECHANICAL PROPERTIES - Rough turned (1X) in the annealed condition

Size max (mm)	Heat treatment	Hardness HB max*	R _{p0,2} (MPa) min	R _m (MPa)	A ₅ (%) min	KV (J) min
100	Annealed (+A)	295	-	950 max	-	-
≤ 60	Quenched + Tempered (+QT 800)	-	600	800÷950	14	25
> 60 ≤ 100	Quenched + Tempered (+QT 900)	-	700	900÷1050	12	20
					12	20
					10	15

* only for guidance

MECHANICAL PROPERTIES - Cold drawn (2H, 2B) and ground bars (2G) in the solution annealed condition

Size max (mm)	Annealed		Quenched + Tempered				
	R _m (MPa) max	HB max*	Heat treatment	R _{p0,2} (MPa) min	R _m (MPa) max	A ₅ (%) min**	KV (J) min**
≤ 10	1050	330	Quenched + Tempered (+QT800)	750	850÷1100	7	-
> 10 ≤ 16	1050	330		700	850÷1100	7	-
> 16 ≤ 40	1000	310		650	800÷1050	9	25
> 40 ≤ 63	950	295		650	800÷1000	12	25
> 63 ≤ 100	950	295		650	800÷950	12	20

* for reference only ** values valid only for size ≥ 5 mm

MECHANICAL PROPERTIES - Cold drawn wire and coils (2H)

Tensile strength levels R _m (MPa)	+C 500	+C 650	+C 800	+C900
	500÷700	650÷850	800÷1000	900÷1100

Note: the desired tensile strength level shall be evaluated depending on diameter required

MECHANICAL PROPERTIES - Cold drawn wire and coils in the solution annealed condition (2D)

Size	0,50 ≤ d ≤ 1,00	1,00 ≤ d ≤ 3,00	3,00 ≤ d ≤ 5,00	5,00 ≤ d ≤ 16,00
R _m (MPa) max	1100	1050	1000	950
A (%) max	10	10	10	15

 Note: If skin passed, R_m might be increased by up to 50 MPa

WORKING TEMPERATURES RECOMMENDED

Operation	Hot forgings deformation	Annealing (furnace, air)	Quenching (air, oil)	Tempering (QT 800)	Tempering (QT 900)
°C	900÷1100	680÷800	950÷1050	750÷800 + 650÷700	600÷650

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STAINLESS STEELS
MARTENSITIC

Rodacciai name

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