

LET'S MOVE THE WORLD

STAINLESS
STEEL CHROME
PLATED BARS

The logo for CMC Italia srl features the letters 'CMC' in a bold, sans-serif font. A horizontal line is positioned above the 'C' and 'M', with a small circle centered above the 'C'. Below the 'C' and 'M', the text 'Italia srl' is written in a smaller, lowercase font.

CMC Italia srl



3.

STAINLESS STEEL CHROME PLATED BARS

C.M.C. ITALIA has made efficiency and reliability its strengths, establishing itself as a true partner in customer relations.

The range of products distributed by C.M.C. ITALIA also includes stainless steel chrome bars. Chrome plating gives the bars high machinability, which ensures increased productivity and a significant reduction in tool wear and machining time, not to mention corrosion resistance from 600 h to 3500 h. The high quality of the material selected by

C.M.C. ITALIA and the technology applied in its processing make this product particularly suitable for the wind power, ship building, aeronautical, food, petrochemical, waste water treatment and lifting sectors.

For more information on the available steel grades, reference standards, and mechanical properties of the stainless steel chrome bars, please consult the table below or get in touch with the specialists at C.M.C. ITALIA.

Ø8-140 mm / Ø3/4" - 5"

ADVANTAGES IN USE

AVERAGE HARDNESS OF THE CHROME LAYER

Through the electrolytic coating process, the thickness of the chrome reaches an average hardness of 70 HRC (equivalent to 1,100 HV).

IMPROVED WEAR RESISTANCE

The high surface hardness ensures wear resistance 12-15 times higher than special steels and 4-5 times greater than hardened steels.

HIGH CORROSION RESISTANCE

Thanks to its inherent corrosion resistance, stainless steels offer an operational lifespan 20-25 times longer than micro-alloyed chromed steels and 2-3 times longer than Nickel-Chrome alloy.

ENHANCED LUBRICATION

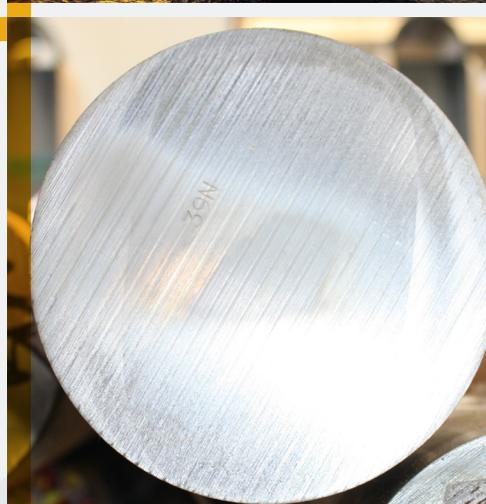
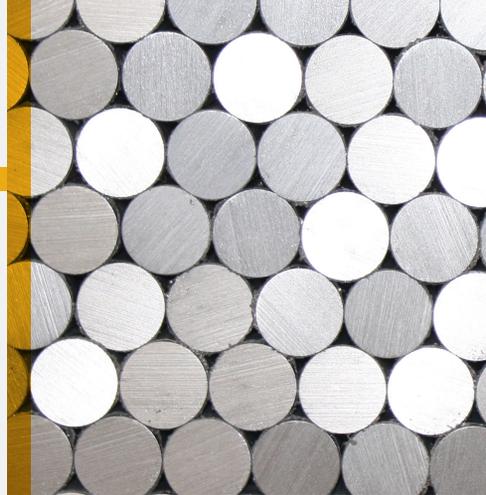
The chromed surface retains lubricants, providing significant benefits in terms of friction and coupling.

APPLICATION IN THE INDUSTRIES

CMC ITALIA has focused a significant part of its stock on stainless chromed bars. The availability of a wide range of stainless steel grades allows customers to select the type best suited to their specific needs.

Thanks to its exceptional mechanical properties and virtually unlimited corrosion resistance, the stainless chromed bar represents the ultimate solution for a wide range of applications, including **marine environments, extreme weather conditions, mining, road transport, chemical industry, civil engineering, agricultural machinery, offshore sector, hydraulic and pneumatic applications, aerospace, aeronautical, nuclear sectors, and more.**

Once again, CMC ITALIA demonstrates its ability to adapt to new customer and market needs, maintaining a continuous dynamic of evolution.





DIAMETER		Kg/m	TOLERANCE h7	TOLERANCE f7	TOLERANCE f8
INCH	mm	Kg/m	mm	mm	mm
	8	0,394	+ 0 / - 0,015	- 0,013 / - 0,028	- 0,013 / - 0,035
	10	0,616			
	12	0,887			
	14	1,208	+ 0 / - 0,018	- 0,020 / - 0,041	- 0,016 / - 0,043
	15	1,387			
	16	1,578			
	17	1,781			
	18	1,997			
	19	2,225			
3/4"	19,05	2,236	+ 0 / - 0,021	- 0,020 / - 0,041	- 0,020 / - 0,053
	20	2,465			
	22	2,983			
7/8"	22,22	3,042			
	24	3,549			
	25	3,851			
1"	25,4	3,976			
	28	4,831			
1,1/8"	28,57	5,03			
	30	5,546			
1,1/4"	31,75	6,212	+ 0 / - 0,025	0,025 / - 0,050	- 0,025 / - 0,064
	32	6,31			
	35	7,549			
	36	7,986			
	38	8,898			
1,1/2"	38,1	8,945			
	40	9,86			
	42	10,87			
1,3/4"	44,45	12,175			
	45	12,479			
	50	15,406			
2"	50,8	15,903	+ 0 / - 0,030	- 0,030 / - 0,060	- 0,030 / - 0,066
	55	18,641			
	56	19,325			
2,1/4"	57,15	20,127			
	60	22,184			
	63	24,458			
2,1/2"	63,5	24,848			
	65	26,036			
	70	30,195			
	72	31,945			
	75	34,663			
3"	76,2	35,781	+ 0 / - 0,035	- 0,036 / - 0,071	- 0,036 / - 0,090
	80	39,438			
3,1/4"	82,55	41,993			
	85	44,522			
3,1/2"	88,9	48,702			
	90	49,914			
	95	55,614			
	100	61,623			

TECHNICAL CHARACTERISTICS

TYPES OF STAINLESS CHROMED STEEL

AISI	EN 10088-3	DESIGNATION	CORROSION RESISTANCE	MECHANICAL PROPERTIES N/mm ² according to NFEN 10088-3	
				Rm	Rp0.2
303	1.4305	X8CrNi18-9	2100h	>500	>190
304	1.4307	X2CrNi18-9	2400h	>450	>175
316	1.4404	X2CrMo17-12-2	3000h	>500	>200
431	1.4057	X17CrNi16-2	1000h	900/1050	>700
F51-329A	1.4462	X2CrNiMoN22-5-3	3400h	650/880	>450

TECHNICAL CHARACTERISTICS

DIAMETER	TOLERANCE ISO	STRAIGHTNESS	ROUGHNESS		ROUNDNESS	CHROME LAYER HARDNESS
		MAX	Ra MAX	Rt MAX		
8 ÷ 140	f7 h6 h7	0,5mm/m	0.05 ÷ 0,20 micron	Rt: max 2.5 micron	1/2 Tolleranza	min. 900 HV _{0,1}

MECHANICAL PROPERTIES

STEEL					
UNI	AISI 431	AISI 303	AISI 304	AISI 316	AISI 329
	1.4057	1.4305	1.4301	1.4401	1.4460
Yield point Re N/mm ²	> 600	> 220	> 190	> 220	>460
Tensile strength Rm N/mm ²	800-950	500 - 700	500 - 700	500 - 700	650-880
Elongation A ₅ % min.	> 12	>45	>45	>40	>25

CHEMICAL ANALYSIS

STEEL	C%	Mn%	Cr%	S%	Si%	Mo%	Ni%	P%	Cu%
AISI 431 1.4057	0,18	0,8	15,6	0,015	0,4	0,8	-	0,03	-
AISI 303 1.4305	0,12	2	18	0,2	1	0,5	-	0,2	-
AISI 304 1.4301	0,05	1,8	18,2	0,025	0,4	-	0,08	0,03	0,4
AISI 316 1.4401	0,05	1,8	18	0,025	0,8	2,1	-	0,035	-
AISI 329 1.4460	0,03	1	25,5	0,025	0,5	1,4	0,12	0,025	-

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