



STAINLESS STEEL BARS



Marcegaglia Stainless Richburg Stainless Steel Bars

Marcegaglia produces high-performance stainless steel bars in an industry-leading variety of grades and shapes.

Our end-to-end approach, from melting to testing, means that we can offer a full range of long products with industry-leading consistency, delivery performance, and technical support.

Marcegaglia high-performance stainless steel bars are produced in an extremely wide selection of grades, including our Prodec range for superior machinability. We have long-term partnerships with service centers that operate in several end-use segments: chemical, oil & gas, automotive, aerospace to name a few.

We are proud to serve you with superior communication and technical expertise. We're here to support you all the way from materials selection to end use, helping you to get the best result possible from our stainless steels.



Key benefits

- Product quality and broad offering
- Delivery reliability
- Technical expertise
- Easy to deal with

Our mill

Richburg Stainless Bar is well known for its high quality Prodec bars and technical expertise. The unit was established in 1994 and produces bars in premium commodity and special grades. Bars are produced from billets made in the Marcegaglia meltshop in the UK and hot rolled at several facilities. Marcegaglia Richburg produces quality cold finished bars from ¼ inch to 15 inches.

Contact sales at
sales.richburg@marcegaglia.com

BAR PROGRAM

Items shown are produced regularly for quick delivery from stock or within competitive industry lead-times. Please call a Marcegaglia representative for availability.

ROUND BARS										
	303	304 L	304 H	316 L	317 L	310	321	347	253 MA	416
1/4"-1 CDA	P	P	P	P	P		x	x		
9/16"-1 CFA	P	P	P	P	P	x	x	x	x	x
>1-3 3/4" CFA	P	P	P	P	P	x	x	x	x	x
2-3 1/2" HRART	P	P	P	P	P	x	x	x	x	x
>3 1/2"-7" HRART	P	P	P	P	P	x	x	x		x
>7-10" HRART	P	P		P						
>10-15" HRART	P	P		P						

	440 C	17-4	15-5ESR	15-5VAR	LDX 2101®	2205 +2	2507	304 HN	N60	XM-19	XM-25
1/4"-1 CDA											
9/16"-1 CFA		P	x	x	x				x ^A		x ^A
>1-3 3/4" CFA	x	P	x	x	x	x	x	x ^B	x ^B	x ^B	x
2-3 1/2" HRART	x	P	x	x	x	x	x	x ^B	x	x ^B	x
>3 1/2"-7" HRART		P				x	x				x
>7-10" HRART											
>10-15" HRART											

P: PRODEC® Improved Machinability
A: Alloy only available down to 1/4"

CDA: Cold Drawn Annealed
B: HS available from 1 3/8" to 3 1/2"

CFA: Cold Finished Annealed

HRART: Hot Rolled Annealed Rough Turned

HEXAGONAL					
	303	304 L	316 L	321	347
1/4"-1"	x	x	x	x	x
1"-1 1/2"	x	x	x		
2 1/2"	x	x	x		

LENGTH CAPABILITIES		
1/4"-1	CDA	12' STD, 16' Max
1/2"-3 3/4"	CFA	12' STD, 24' Max
2"-3 1/2"	HRART	12' STD, 24' Max
>3 1/2"-7"	HRART	12' STD, 30' Max
>7"-15"	HRART	Inquire

OTHER VALUE FEATURES OF OUR BAR PROGRAM:

- PRODEC®:** For improved machinability 303, 304L, 316L and 17-4 P come standard as Prodec® Quality Material.
- Complete program:** Standard and special grades, in sizes from 1/4" to 15" round and 3/8" to 2 1/2" hexagonal.
- Quality:** Marcegaglia Bar is ISO 9001/AS9100/PED approved. Each bundle is "XRF" grade assured.
- Conditions:** 17-4 & 15-5 aged conditions, strain hardened austenitics, and Q&T martensitics available upon inquiry.
- DFARS Compliant:** All material produced is 225.7002-3B1 & 252.225.7014 compliant.
- Polished surface:** CD and CF products 9/16" to 3" (including hexagonal to 1").
- Centerless Grinding:** 1/4" - to 1/2" -standard tolerance available in 1/4" to 4" diameters.
- Eddy Current testing:** Standard for 303 and 416 grades. Available upon request in other grades.
- Chamfering:** Both ends in drawn products and one end for CF products through 1 1/8".
- Defense:** Offering various grades to support the firearms industry.



SPECIFICATIONS

Grade	UNS	ASTM	ASME	Federal	AMS
303	S30300	A 582	NA	NA	5640
304 / 304L	S30400 / S30403	A 276, A 479	SA-479, SA-276	QQS 763F	5639, 5647, QQS 763
316 / 316L	S31600 / S31603	A 276, A 479	SA-479, SA-276	QQS 763F	5648, 5653, QQS 763
317 / 317L	S31700 / S31703	A 276, A 479	SA-479, SA-276	QQS 763F	QQS 763
309, 309S	S30900 / S30909 / S30908	A 276, A 479	SA-479, SA-276		5650
310, 310S	S31000 / S31009 / S31008	A 276, A 479	SA-479, SA-276		5651
321 / 321H	S32100 / S32109	A 276, A 479	SA-479, SA-276		5645
347 / 347H	S34700 / S34709	A 276, A 479	SA-479, SA-276		5646
253 MA	S30815	A 276, A 479	SA-479, SA-276		
410	S41000	A 276, A 479	SA-479, SA-276	QQS 763F	5612, 5613, QQS 763
416	S41600	A 582			5610
440C	S44004	A 276		QQS 763F	QQS 763, 5630, 5880
17-4	S17400	A 564	SA-564		5643
15-5 ESR/VAR	S15500	A 564	SA-564		5659
EN lean duplex 1.4162	S32101	A 276, A 479	SA-479, SA-276		
2205	S31803 / S32205	A 276, A 479	SA-479, SA-276		
2507	S32750	A 276, A 479	SA-479, SA-276		
304HN	S30452				
N60	S21800	A 276, A 479			5848
XM-19	S20910	A 276, A 479	SA-479, SA-276		

TOLERANCES - STAINLESS STEEL BAR

Conforms to ASTM A 484						
Round Bar/Cold Finished		Round Bar/Hot Rolled and Rough Turned			Square Bar and Hexagons/Cold Finished	
Size	Tolerances	Size	Tolerances	Out of Round	Size	Tolerances
Under $\frac{5}{16}$ "	±0.001	Over 2" to 2 $\frac{1}{2}$ "	+ $\frac{1}{32}$ -0	0.023	Under $\frac{5}{16}$ "	+0.000-0.002
$\frac{5}{16}$ " up to but excluding $\frac{1}{2}$ "	±0.0015	Over 2 $\frac{1}{2}$ " to 3 $\frac{1}{2}$ "	+ $\frac{3}{64}$ -0	0.035	Over $\frac{5}{16}$ " to under $\frac{1}{2}$ "	+0.000-0.003
$\frac{1}{2}$ " up to but excluding 1"	±0.002	Over 3 $\frac{1}{2}$ " to 4 $\frac{1}{2}$ "	+ $\frac{1}{16}$ -0	0.046	$\frac{1}{2}$ " up to and including 1"	+0.000-0.004
1" up to but excluding 1 $\frac{1}{2}$ "	±0.0025	Over 4 $\frac{1}{2}$ " to 5 $\frac{1}{2}$ "	+ $\frac{5}{64}$ -0	0.058	Over 1" up to and including 2"	+0.000-0.006
1 $\frac{1}{2}$ " up to and including 3 $\frac{1}{4}$ "	±0.003	Over 5 $\frac{1}{2}$ " to 6 $\frac{1}{2}$ "	+ $\frac{1}{8}$ -0	0.070	Over 2" up to and including 3"	+0.000-0.008
Over 3 $\frac{1}{4}$ " up to and including 4 $\frac{1}{2}$ "	±0.005	Over 6 $\frac{1}{2}$ " to 8"	+ $\frac{5}{32}$ -0	0.085	Over 3"	+0.000-0.010
Over 4 $\frac{1}{2}$ " up to and including 6"	±0.008	Over 8" to 12"	+ $\frac{3}{16}$ -0	0.094		

STRAIGHTNESS TOLERANCES FOR MACHINE-STRAIGHTENED BAR

Rough Turned	Cold Finished
$\frac{1}{8}$ " in any 5'	$\frac{1}{16}$ " in any 5'
but may not exceed $\frac{1}{8}$ " x $\frac{\text{length in feet}}{5}$	but may not exceed $\frac{1}{16}$ " x $\frac{\text{length in feet}}{5}$

WEIGHT FORMULAS FOR STEEL

Weight estimates per linear foot
Rounds= $D^2 \times 2.6729$
Hexagonals= $D^2 \times 2.9473$

Ensuring quality with end-to-end production

Marcegaglia Stainless Richburg



Melting shop

Consistently produced high quality semis are made at the SMACC melting shop.



Billet feedstock

Our rolling mill uses billet feedstock produced at the SMACC melting shop.



Hot rolling

Rod coil feedstock is produced at several facilities.



Bar heat treatment

Various heat treatments performed on bar to achieve the optimal material properties.



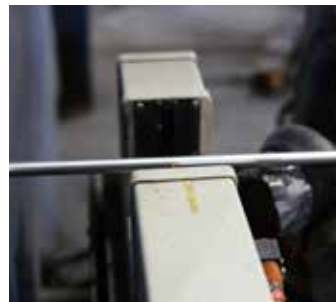
Cold drawing operation

Coil is drawn through a die, reducing the cross-sectional area of the bar.



Finishing

Peeling of bars enhances surface quality and tolerances.



Testing

Dimensional and Eddy-Current inspection are standard.



Packing & shipping

Final process steps include inspection, packing, and shipping.

High quality according to international standards

Our manufacturing programs are supported by in-house product inspection and testing, and the extensive experience of our technical team. Richburg is accredited to recognized international standards, including:

- ISO 9001
- AS9100
- PED/PER
- Each bundle is "XRF" grade assured
- DFARS compliant



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