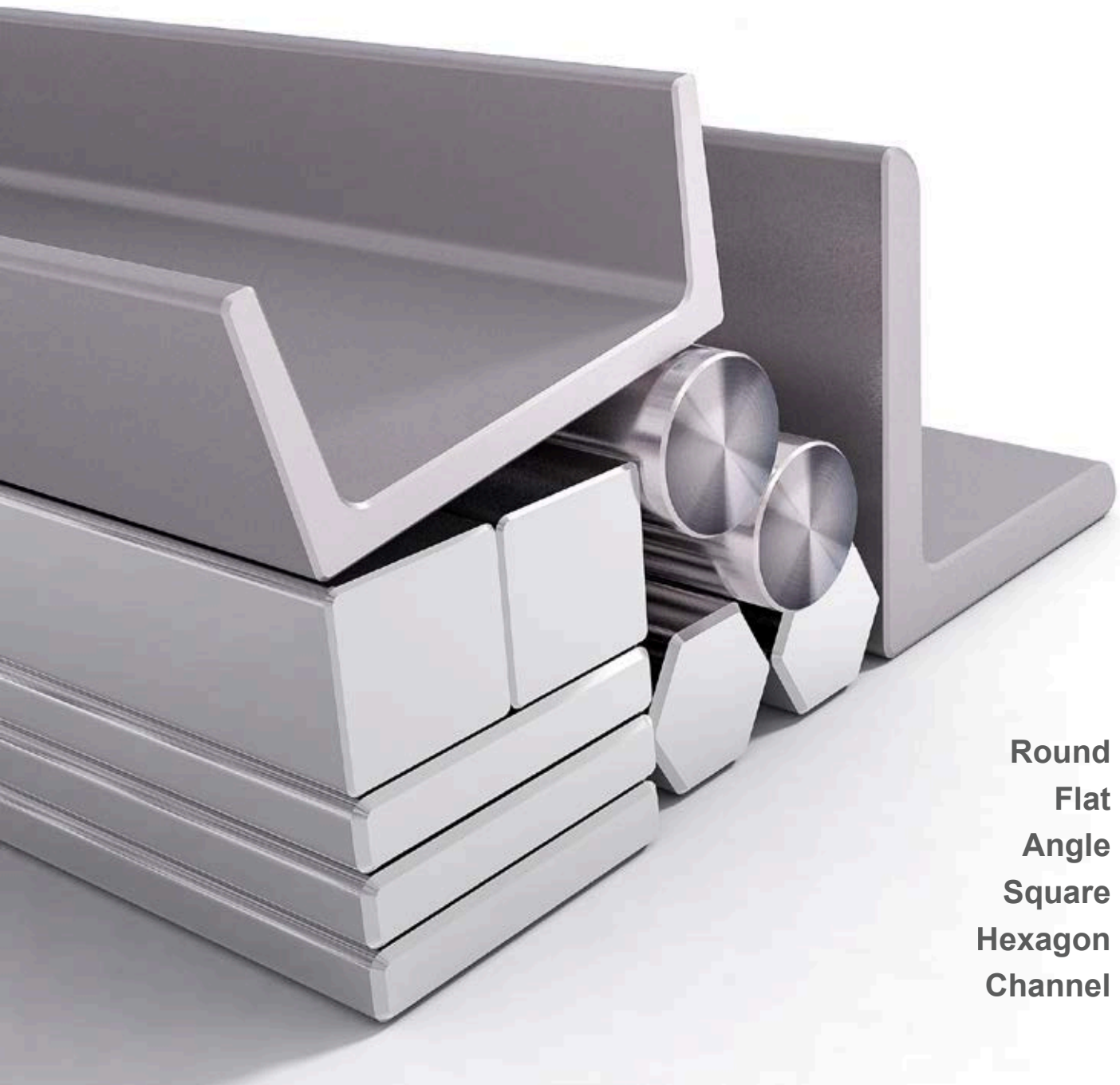
BAR&ROD

Stainless Steel Catalogue

CIVMATS
Materials for Civilization



Round Bar
Flat Bar
Angle Bar
Square Bar
Hexagon Bar
Channel Bar

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WHO WE ARE

Civmats & Its Founder

Civmats was established in 1989 by its first CEO Dahe He. His initial acquaintance with steel industry was in 1975 when he worked as a technician apprentice in a local steel mill. The mill produced stainless steel bars and wires. Though started from a humble background, Dahe aspired to be the best among his peers. His industriousness, fast-learning abilities and communication skills paid off. Four years later in 1979, he was promoted as the head of the mill, in charge of some 90 workers. He worked there for two more years.

In 1982 introduced by a big account, he left the mill and worked for a state-owned enterprise to chair a new workshop producing stainless steel pipes. There he worked for over six years, during which period, he worked half of his time as a workshop manager and half of his time as a sales manager.

In 1989 when he was on his business trip, he coincidently visited a stainless steel bar mill which was almost at bankruptcy. He decided to buy it with all his savings, bank loans and government funds. That's how Civmats came into being.

Mission

A roadmap without an articulate mission statement goes nowhere. A mission statement conveys to all the stakeholders the purpose and meaning of our existence as a company, based on which all our business decisions and actions are rationalized and conducted.

Our mission is to offer the best steel solutions and products in such a cost-effective way that each transaction concluded will take us closer to world civilization. As a steel company, we believe materials play a significant role in acceleration of human civilization. Each time new materials are developed, great inventions and disruptions take place. Cities emerge on the land, ships sail on the sea, and planes fly on the sky. None of these constructions can be completed without steel materials, be it carbon steel, stainless steel or super alloys. With this belief, we name our company Civmats, which means materials for civilization.

Vision

We are living in a constantly evolving world full of threats and opportunities. We contend with threats, we grab new opportunities and we keep expanding our business footprints worldwide ambitiously. It is no easy work. The past decade bears witness to the vicissitudes of steel industry, especially stainless steel. Competition grows intense, which turns the ever blue sea into red sea. To thrive as a steel materials business for decades to come, we must keep aware of changes, stay ahead of emerging trends and move swiftly. That's always our vision. It provides a roadmap for winning with you, all of our stakeholders.

Our vision defines our strategy to carry out our mission. We call it a hybrid strategy because it entails two parts : 1) product development and 2) market development.

While our company thrives on its initial stainless steel business, we have a considerable amount of old customers demand titanium and Special Alloy like duplex and super alloy. That's we how we increase our production line and pursue product development strategy. We also adopt market development strategy. With the development of new media and new technology, we will make our products and solutions accessible to more new markets.

Values

The today's business and the tomorrow's business will need our people to think, act and accomplish. Our values are integral to our corporate culture. It is set to help us weigh our business decisions, pursue excellent performance and create value. Civmats people are expected to embody "CIVMATS" spirits:

- **C**hallenger: Be a challenger and be a leader
- **I**ntegrity: Be honest and be real
- **V**isionary: Be far-sighted and forward-looking
- **M**aker: Make it happen
- **A**ccountability: Adopt an "it is up to me" attitude
- **T**eamwork: Work collaboratively
- **S**martness: Work hard and work smart

Main Grades of Stainless Steel Bar & Rod

304

AISI304, SUS304, S30400, 1.4301

C	Si	Mn	P	S	Ni	Cr	N	Fe
≤0.08%	≤0.75%	≤2.00%	≤0.045%	≤0.030%	8.0%~10.5%	18.0%~20.0%	≤0.10%	Remainder

304L

AISI304L, SUS304L, S30403, 1.4306

C	Si	Mn	P	S	Ni	Cr	N	Fe
≤0.03%	≤0.75%	≤2.00%	≤0.045%	≤0.030%	8.0%~12.0%	18.0%~20.0%	≤0.10%	Remainder

316

AISI316, SUS316, S31600, 1.4401

C	Si	Mn	P	S	Ni	Cr	Mo	N	Fe
≤0.08%	≤0.75%	≤2.00%	≤0.045%	≤0.030%	10.0%~14.0%	16.0%~18.0%	2.0%~3.0%	≤0.10%	Remainder

316L

AISI316L, SUS316L, S31603, 1.4404

C	Si	Mn	P	S	Ni	Cr	Mo	N	Fe
≤0.03%	≤0.75%	≤2.00%	≤0.045%	≤0.030%	10.0%~14.0%	16.0%~18.0%	2.0%~3.0%	≤0.10%	Remainder

321

AISI321, SUS321, S32100, 1.4541

C	Si	Mn	P	S	Ni	Cr	Ti	N	Fe
≤0.08%	≤0.75%	≤2.00%	≤0.045%	≤0.030%	9.0%~12.0%	17.0%~19.0%	5x(C%+N%)~0.70%	≤0.10%	Remainder

316Ti

AISI316Ti, SUS316Ti, S31635, 1.4571

C	Si	Mn	P	S	Ni	Cr	Mo	Ti	N	Fe
≤0.08%	≤0.75%	≤2.00%	≤0.045%	≤0.030%	10.0%~14.0%	16.0%~18.0%	2.0%~3.0%	5x(C%+N%)~0.70%	≤0.10%	Remainder

317L

AISI317L, SUS317L, S31726, 1.4438

C	Si	Mn	P	S	Ni	Cr	Mo	N	Fe
≤0.03%	≤0.75%	≤2.00%	≤0.045%	≤0.030%	11.0%~15.0%	18.0%~20.0%	3.0%~4.0%	≤0.10%	Remainder

310S

AISI310S, SUS310S, S31008, 1.4845

C	Si	Mn	P	S	Ni	Cr	Fe
≤0.08%	≤1.50%	≤2.00%	≤0.045%	≤0.030%	19.0%~22.0%	24.0%~26.0%	Remainder

347

AISI347, SUS347, S34700, 1.4550

C	Si	Mn	P	S	Ni	Cr	Nb	Fe
≤0.08%	≤0.75%	≤2.00%	≤0.045%	≤0.030%	9.0%~13.0%	17.0%~19.0%	10xC%~1.00%	Remainder

Main Grades of Stainless Steel Bar & Rod

S31803

F51, SUS329J3L, 1.4462

C	Si	Mn	P	S	Ni	Cr	Mo	N	Fe
≤0.03%	≤1.00%	≤2.00%	≤0.030%	≤0.020%	4.5%~6.5%	21.0%~23.0%	2.5%~3.5%	0.08%~0.20%	Remainder

S32205

2205, SUS329J3L, F51, 1.4462

C	Si	Mn	P	S	Ni	Cr	Mo	N	Fe
≤0.03%	≤1.00%	≤2.00%	≤0.030%	≤0.020%	4.5%~6.5%	22.0%~23.0%	3.0%~3.5%	0.14%~0.20%	Remainder

S32750

2507, NAS74N, F53, 1.4410

C	Si	Mn	P	S	Ni	Cr	Mo	Cu	N	Fe
≤0.03%	≤0.80%	≤1.20%	≤0.035%	≤0.020%	6.0%~8.0%	24.0%~26.0%	3.0%~5.0%	≥0.50%	0.24%~0.32%	Remainder

904L

AISI904L, SUS904L, N08904, 1.4539

C	Si	Mn	P	S	Ni	Cr	Mo	Cu	N
≤0.02%	≤1.00%	≤2.00%	≤0.045%	≤0.035%	23.0%~28.0%	19.0%~23.0%	4.0%~5.0%	1.0%~2.0%	≤0.10%

254SMo

AISI254SMo, SUS254SMo, S31254, 1.4547

C	Si	Mn	P	S	Ni	Cr	Mo	Cu	N	
≤0.02%	≤0.80%	≤1.00%	≤0.030%	≤0.010%	17.5%~18.5%	19.5%~20.5%	6.0%~6.5%	0.5%~1.0%	≤0.10%	Remainder

17-4PH

AISI630, SUS630, S17400, 1.4542

C	Si	Mn	P	S	Ni	Cr	Cu	Nb+Ta	Fe
≤0.07%	≤1.00%	≤1.00%	≤0.040%	≤0.030%	3.0%~5.0%	15.0%~17.5%	3.0%~5.0%	Nb+Ta: 0.15%~0.45%	Remainder

253MA

AISI253MA, SUS253MA, S30815, 1.4835

C	Si	Mn	P	S	Ni	Cr	Ce	Fe
0.05%~0.10%	1.40%~2.20%	≤2.00%	≤0.040%	≤0.030%	10.0%~12.0%	20.0%~22.0%	0.03%~0.08%	Remainder

301

AISI301, SUS301, S30100, 1.4319

C	Si	Mn	P	S	Ni	Cr	N	Fe
≤0.15%	≤1.00%	≤2.00%	≤0.045%	≤0.030%	6.0%~8.0%	16.0%~18.0%	≤0.10%	Remainder

302

AISI302, SUS302, S30200, 1.4318

C	Si	Mn	P	S	Ni	Cr	N	Fe
≤0.15%	≤0.75%	≤2.00%	≤0.045%	≤0.030%	8.0%~10.0%	17.0%~19.0%	≤0.10%	Remainder

Main Grades of Stainless Steel Bar & Rod

304N
AISI304N, SUS304N1, S30451, 1.4315

C	Si	Mn	P	S	Ni	Cr	N	Fe
≤0.08%	≤2.00%		≤0.030%			18.0%~20.0%		Remainder
	≤0.75%		≤0.045%		8.0%~10.5%		0.10%~0.60%	

304H
AISI304H, SUS304, S30409, 1.4948

C	Si	Mn	P	S	Ni	Cr	Fe
0.04%~0.10%	≤2.00%		≤0.030%			18.0%~20.0%	
	≤0.75%		≤0.045%		8.0%~10.5%		Remainder

309S
AISI309S, SUS309S, S30908, 1.4833

C	Si	Mn	P	S	Ni	Cr	Fe
≤0.08%	≤2.00%		≤0.030%			22.0%~24.0%	
	≤0.75%		≤0.045%		12.0%~15.0%		Remainder

310H
AISI310H, SUS310H, S31009, 1.4845

C	Si	Mn	P	S	Ni	Cr	Fe
0.04%~0.10%	≤2.00%		≤0.030%			24.0%~26.0%	
	≤0.75%		≤0.045%		19.0%~22.0%		Remainder

316LN
AISI316LN, SUS316LN1, S31653, 1.4429

C	Si	Mn	P	S	Ni	Cr	Mo	N	Fe
≤0.03%	≤2.00%		≤0.030%			16.0%~18.0%	0.10%~0.60%		
	≤0.75%		≤0.045%		10.0%~14.0%		2.0%~3.0%		Remainder

316H
AISI316H, SUS316H, S31609, 1.4436

C	Si	Mn	P	S	Ni	Cr	Mo	Fe
0.04%~0.10%	≤2.00%		≤0.030%			16.0%~18.0%		Remainder
	≤0.75%		≤0.045%		10.0%~14.0%		2.0%~3.0%	

321H
AISI321H, SUS321H, S32109, 1.4541

C	Si	Mn	P	S	Ni	Cr	Ti	Fe
0.04%~0.10%	≤2.00%		≤0.030%			17.0%~19.0%		Remainder
	≤0.75%		≤0.045%		9.0%~12.0%		4x(C%+N%)~0.70%	

347H
AISI347H, SUS347H, S34709, 1.4912

C	Si	Mn	P	S	Ni	Cr	Nb	Fe
0.04%~0.10%	≤2.00%		≤0.030%			17.0%~19.0%		Remainder
	≤0.75%		≤0.045%		9.0%~13.0%		8xC%~1.00%	

S32760
F55, 1.4501

C	Si	Mn	P	S	Ni	Cr	Mo	Cu	W	N	Fe
≤0.03%	≤1.00%		≤0.010%			24.0%~26.0%	0.50%~1.00%		0.20%~0.30%		
	≤1.00%		≤0.030%		6.0%~8.0%		3.0%~4.0%		0.50%~1.00%		Remainder

Main Grades of Stainless Steel Bar & Rod

S32304
2304, DP11, 1.4362

C	Si	Mn	P	S	Ni	Cr	Mo	Cu	N	Fe
≤0.03%	≤2.50%		≤0.030%			21.5%~24.5%	0.05%~0.60%			Remainder
	≤1.00%		≤0.040%		3.0%~5.5%		0.05%~0.60%		0.05%~0.20%	

S32550
255, SUS329J4L, QSA2505, 1.4507

C	Si	Mn	P	S	Ni	Cr	Mo	Cu	N	Fe
≤0.04%	≤1.50%		≤0.030%			24.0%~27.0%		1.50%~2.50%		Remainder
	≤1.00%		≤0.040%		4.5%~6.5%		2.9%~3.9%		0.10%~0.25%	

S32900
329, SUS329J1, 1.4477

C	Si	Mn	P	S	Ni	Cr	Mo	Fe
≤0.08%	≤1.00%		≤0.030%			23.0%~28.0%		Remainder
	≤0.75%		≤0.040%		2.0%~5.0%		1.0%~2.0%	

S32950
F52

C	Si	Mn	P	S	Ni	Cr	Mo	N	Fe
≤0.03%	≤2.00%		≤0.010%			26.0%~29.0%	0.15%~0.35%		
	≤0.60%		≤0.035%		3.5%~5.2%		1.0%~2.5%		Remainder

926
AISI926, SUS926, N08926, 1.4529

C	Si	Mn	P	S	Ni	Cr	Mo	Cu	N
≤0.02%	≤2.00%		≤0.010%			19.0%~21.0%		0.5%~1.5%	
	≤0.50%		≤0.030%		24.0%~26.0%		6.0%~7.0%		0.15%~0.25%

654SMo
AISI654SMo, SUS654SMo, S32654, 1.4652

C	Si	Mn	P	S	Ni	Cr	Mo	Cu	N
≤0.02%	19.5%~20.5%		≤0.005%			24.0%~25.0%		0.3%~0.6%	
	≤0.50%		≤0.030%		21.0%~23.0%		7.0%~8.0%		0.45%~0.55%

17-7PH
AISI631, SUS631, S17700, 1.4568

C	Si	Mn	P	S	Ni	Cr	Al	Fe
≤0.08%	≤1.00%		≤0.030%			16.0%~18.0%		Remainder
	≤0.75%		≤0.040%		6.0%~7.7%		0.75%~1.0%	

PH15-7Mo
AISI630, SUS630, S15700, 1.4542

C	Si	Mn	P	S	Ni	Cr	Mo	Al	Fe
≤0.08%	≤1.00%		≤0.030%			14.0%~16.0%	0.75%~1.0%		
	≤0.75%		≤0.040%		6.0%~7.7%		2.0%~3.0%		Remainder

15-5PH
S15500

C	Si	Mn	P	S	Ni	Cr	Cu	Nb	Ta	Fe
≤0.07%	≤1.00%		≤0.030%			14.0%~15.5%		Nb+Ta: 0.15%~0.45%		
	≤1.00%		≤0.040%		3.5%~5.5%		2.5%~4.5%			Remainder

Main Grades of Stainless Steel Bar & Rod

410

AISI410, SUS410, S41000, 1.4006

0.08%~0.15% ≤1.00% ≤0.030% 11.5%~13.5%

C Si Mn P S Ni Cr Fe

≤1.00% ≤0.040% ≤0.75% Remainder

410S

AISI410S, SUS410S, S41008, 1.4000

≤0.08% ≤1.00% ≤0.030% 11.5%~13.5%

C Si Mn P S Ni Cr Fe

≤1.00% ≤0.040% ≤0.6% Remainder

420

AISI420, SUS420J1, SUS420J2, 1.4021, 1.4028, S42000

≥0.15% ≤1.00% ≤0.030% Remainder

C Si Mn P S Cr Fe

≤1.00% ≤0.040% 12.0%~14.0%

420F

AISI420F, SUS420F, S42020, 1.4029

0.30%~0.40% ≤1.50% 0.20%~0.34% 12.5%~14.0% Remainder

C Si Mn P S Ni Cr Cu Fe

≤1.00% ≤0.060% ≤0.50% ≤0.60%

431

AISI431, SUS431, S43100, 1.4057

≤0.20% ≤1.00% ≤0.030% 15.0%~17.0%

C Si Mn P S Ni Cr Fe

≤1.00% ≤0.040% 1.25%~2.50% Remainder

440A

AISI440A, SUS440A, S44002

0.60%~0.75% ≤1.00% ≤0.030% ≤0.75%

C Si Mn P S Cr Mo Fe

≤1.00% ≤0.040% 16.0%~18.0% Remainder

440B

AISI440B, SUS440B, S44003, 1.4112

0.75%~0.95% ≤1.00% ≤0.030% ≤0.75%

C Si Mn P S Cr Mo Fe

≤1.00% ≤0.040% 16.0%~18.0% Remainder

440C

AISI440C, SUS440C, S44004, 1.4125

0.95%~1.20% ≤1.00% ≤0.030% ≤0.75%

C Si Mn P S Cr Mo Fe

≤1.00% ≤0.040% 16.0%~18.0% Remainder

409(L)

AISI409, AISI409L, SUH409, SUH409L, S40900, 1.4512

≤0.03% ≤1.00% ≤0.020% 10.5%~11.7% ≤0.50% Remainder

C Si Mn P S Ni Cr Ti Nb N Fe

≤1.00% ≤0.040% ≤0.50% 6x(C%+N%)~0.50% ≤0.10%

Main Grades of Stainless Steel Bar & Rod

430

AISI430, SUS430, S43000, 1.4016

≤0.12% ≤1.00% ≤0.030% 16.0%~18.0%

C Si Mn P S Ni Cr Fe

≤1.00% ≤0.040% ≤0.75% Remainder

434

AISI434, SUS434, S43400, 1.4113

≤0.12% ≤1.00% ≤0.030% 0.75%~1.25%

C Si Mn P S Cr Mo Fe

≤1.00% ≤0.040% 16.0%~18.0% Remainder

436

AISI436, SUS436, S43600, 1.4536

≤0.12% ≤1.00% ≤0.030% 0.75%~1.25% Remainder

C Si Mn P S Cr Mo Nb Fe

≤1.00% ≤0.040% 16.0%~18.0% 5*C%~0.8%

439

AISI439, SUS430LX, S43035, 1.4510

≤0.03% ≤1.00% ≤0.030% 17.0%~19.0% Remainder

C Si Mn P S Ni Cr N Fe

≤1.00% ≤0.040% ≤0.50% ≤0.030%

444

AISI444, SUS444, S44400, 1.4521

≤0.25% ≤1.00% ≤0.030% 17.5%~19.5% Ti+Nb: [0.20+4x(C%+N%)]~0.80% Remainder

C Si Mn P S Ni Cr Mo Ti Nb N Fe

≤1.00% ≤0.040% ≤1.00% 1.75%~2.50% ≤0.030%

Package

In Civmats, all of our stainless steel bars are packaged as per international standard to prevent any possible damage or loss. By default, we will use thick woven plastic bag to bundle the finished pipes together in batches. However, for some special pipes that are vulnerable to dirt, scratches, stress or rough handling, we will suggest wooden case for protection. Kindly note, wooden case can incur extra cost, not only its own cost, but also the increased freight cost, which is especially true for air transportation. For enhanced customer experience, we also provide dedicated package as per your special requirements.

Thick woven plastic bag

Wooden case

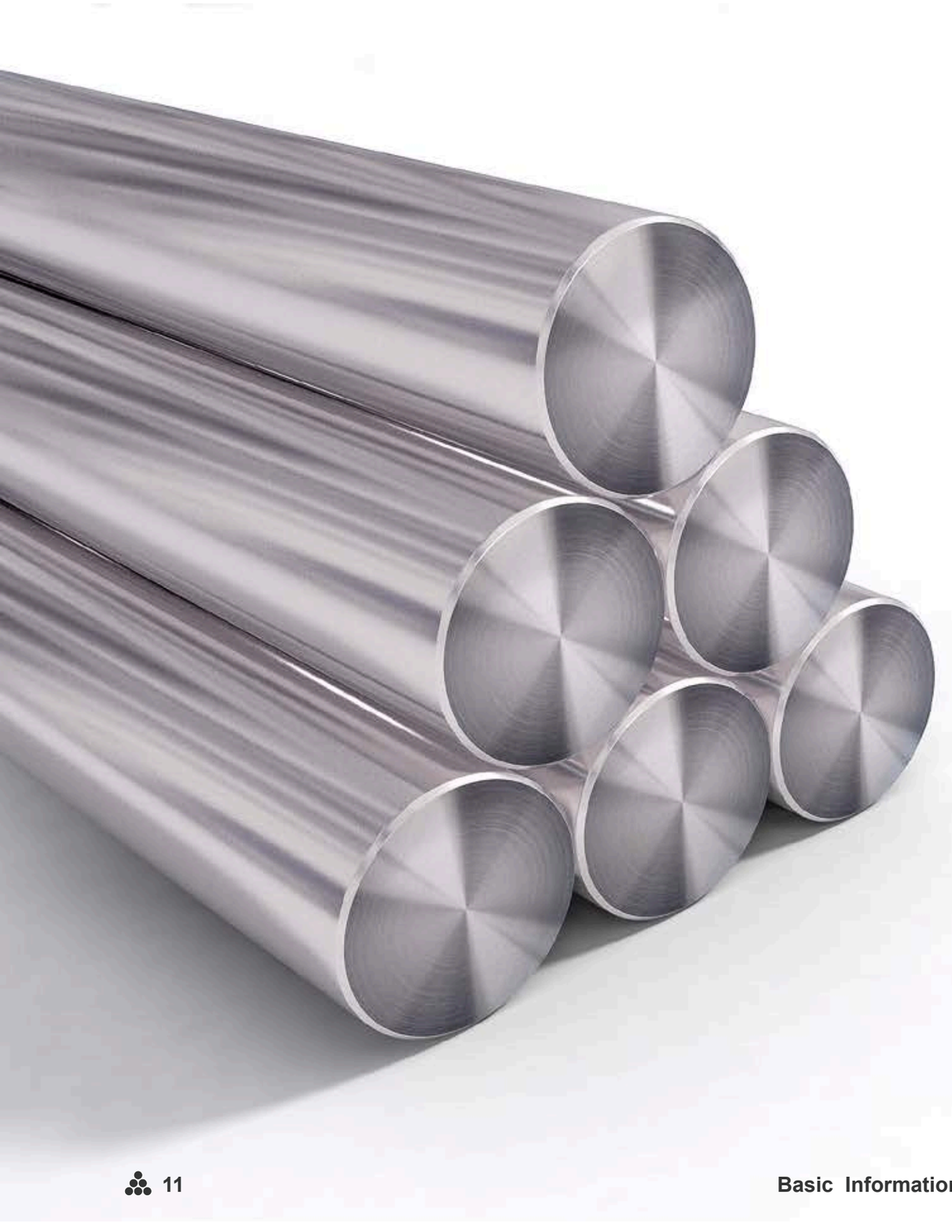
Logistics

By default, we will quote based on sea transportation, such as FOB, CFR, CIF and the like for most enquiries or orders. Quotation based on air transportation is also optional upon your request for urgent demands.

By sea

By air

Round Bar



Specifications

• Diameter: 2mm-600mm
• Delivery State: Cold Drawn, Hot Rolled, Forged, Grinding, Centerless Grinding
• Finish: Bright, Polishing, Mirror, Hairline, Pickled, Peeled, Black
• Hot-selling Products:
a. Stainless Steel Black Bar
b. Stainless Steel Bright Bar
c. S.S. Hot Rolled Round Bar
d. Stainless Steel Forged Bar
• Tolerance: h9, h11

Applications

Home appliances, electric appliances, construction materials, medical equipment, auto parts, petroleum, chemical application, agricultural irrigation, edible oil refinery factories, paper plants, shipyard, nuclear power plant etc.

Introduction

Stainless steel round bars are categorized as both long products and bar materials. SS round bar is long stainless steel product with its cross section shaping round.
The customized length of stainless round bar is 5.8m, 6m, 4m and the like. Bright stainless steel round bar is cold drawn bar with its finish bright and smooth. Black bar stainless steel is hot rolled SS bar with black surface, or oxide skin produced after exposure to high temperature. Stainless steel round bars (also titled stainless steel rods) are extensively used in fields such as kitchenware, shipbuilding, petrochemicals, equipment, medicine, food, electricity, energy, aerospace, construction and decoration, equipment under seawater, chemistry, dye, papermaking, oxalate, fertilizer production equipment, photography, coastland facilities, wire ropes, CD rod, screws and nuts.

Standards

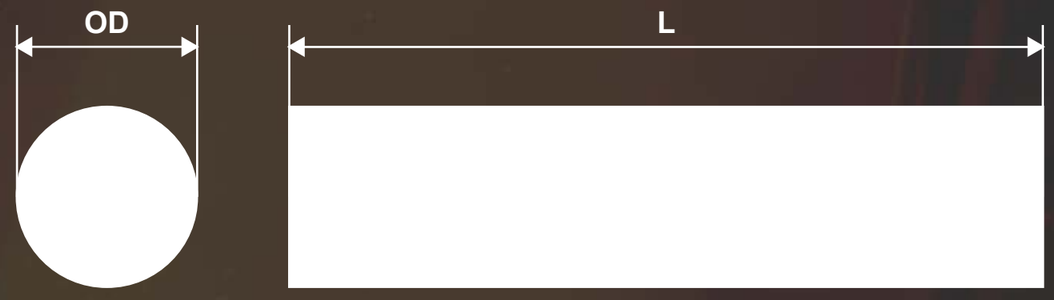
ASTM A276, ASTM A484, ASTM A484M, DIN 671, DIN 1013, EN 10060, EN 10278, GB1220

Features

Anti-corrosion (the degree is susceptible to the alloys contained), heat-resistance, good cold and hot working properties, good toughness, good comprehensive performances and wide application.

Manufacturing Process

Drawing & Formula



Formula:

m = OD (mm) × OD (mm) × L (m) × 0.00623

* For 400 series stainless steel, ratio=0.00609

OD = Outer diameter, L = Length

Tolerance

Tolerance for Hot Rolled Round Bars

Size	Tolerance Rank		
	Group 1	Group 2	Group 3
>7 ~ ≤20	±0.25	±0.35	±0.40
>20 ~ ≤30	±0.30	±0.40	±0.50
>30 ~ ≤50	±0.40	±0.50	±0.60
>50 ~ ≤80	±0.60	±0.70	±0.80
>80 ~ ≤110	±0.90	±1.00	±1.10
>110 ~ ≤150	±1.20	±1.30	±1.40

Tolerance for Hot Forging Round Bars

Size	Tolerance Rank	
	Group 1	Group 2
>50 ~ ≤60	+1.5 -1.0	+2.0 -1.0
>60 ~ ≤80	+2.0 -1.0	+2.5 -1.0
>80 ~ ≤100	+2.5 -1.0	+3.0 -1.0
>100 ~ ≤120	+2.5 -1.5	+3.0 -1.5
>120 ~ ≤140	+3.0 -1.5	+3.5 -1.5
>140 ~ ≤160	+3.0 -2.0	+4.0 -2.0
>160 ~ ≤180	+4.0 -2.0	+5.0 -2.0
>180 ~ ≤200	+5.0 -2.0	+6.0 -2.0
>200 ~ ≤220	+5.0 -3.0	+6.0 -3.0
>220 ~ ≤240	+6.0 -3.0	+7.0 -3.0
>240 ~ ≤250	+7.0 -3.0	+8.0 -3.0
>250 ~ ≤300	+8.0 -3.0	+9.0 -3.0

Tolerance for Cold Drawn Round Bars

Size	Tolerance Rank					
	H8	H9	H10	H11	H12	H13
3	0 ~ -0.014	0 ~ -0.025	0 ~ -0.040	0 ~ -0.060	0 ~ -0.100	0 ~ -0.140
>3 ~ ≤6	0 ~ -0.018	0 ~ -0.030	0 ~ -0.048	0 ~ -0.075	0 ~ -0.120	0 ~ -0.180
>6 ~ ≤10	0 ~ -0.022	0 ~ -0.036	0 ~ -0.058	0 ~ -0.090	0 ~ -0.150	0 ~ -0.220
>10 ~ ≤18	0 ~ -0.027	0 ~ -0.043	0 ~ -0.070	0 ~ -0.110	0 ~ -0.180	0 ~ -0.270
>18 ~ ≤30	0 ~ -0.033	0 ~ -0.052	0 ~ -0.084	0 ~ -0.130	0 ~ -0.210	0 ~ -0.330
>30 ~ ≤50	0 ~ -0.039	0 ~ -0.062	0 ~ -0.100	0 ~ -0.160	0 ~ -0.250	0 ~ -0.390
>50 ~ ≤80	0 ~ -0.046	0 ~ -0.074	0 ~ -0.120	0 ~ -0.190	0 ~ -0.300	0 ~ -0.460

Delivery State

Delivery State Choice	Surface Condition
Forged	Black
	Polished
Hot Rolled	Black
	Polished
	Bright
	Pickled
Cold Drawn	Polished
	Bright

Note: 1. If you require different deliver state than the above listed, kindly confirm with us.
2. In case of any enquiry or order, please kindly let us know any extra requirement not indicated here.

CIVMATS

Flat
Bar

Specifications

• Dimension:
Thickness: 0.5mm - 200mm
Width: 1.5mm - 250mm
• Delivery State: Cold Drawn, Hot Rolled, Flat Bar Cut from Strip or Plates, Grinding, Forged, Centerless Grinding
• Finish: Pickled ,Bright, Polishing, Mirror, Hairline
• Hot-selling Products:
a. Stainless Steel Hot Rolled Flat Bar
b. Stainless Steel Pickeld Flat Bar
c. Stainless Steel Cold Drawn Flat Bar
d. Stainless Steel Polished Flat Bar

Applications

Home appliances, electric appliances, construction materials, medical equipment, auto parts, petroleum, chemical application, agricultural irrigation, edible oil refinery factories, paper plants, shipyard, nuclear power plant etc.

Introduction

Stainless steel flat bars are of rectangle shape with root face (or round edges) and they can be semi-finished or finished products in light of applications. In terms of processing technology, there are cold drawn stainless steel flat bars and hot rolled stainless steel flat bars. In terms of surface treatment, SS flat bars have polished finish and sand blast finish. In case of order, dimension, finish, quantity and other technical requirements such as annealing, solution treatment should be clearly stated. Stainless steel flat bars are widely employed in building structures and engineering structures like house beams, bridges, power transmission tower, hoisting and conveying machinery, shipyards, industrial furnace, reaction tower, containers and warehouse shelves, fences, power transmission ships, vehicles etc.

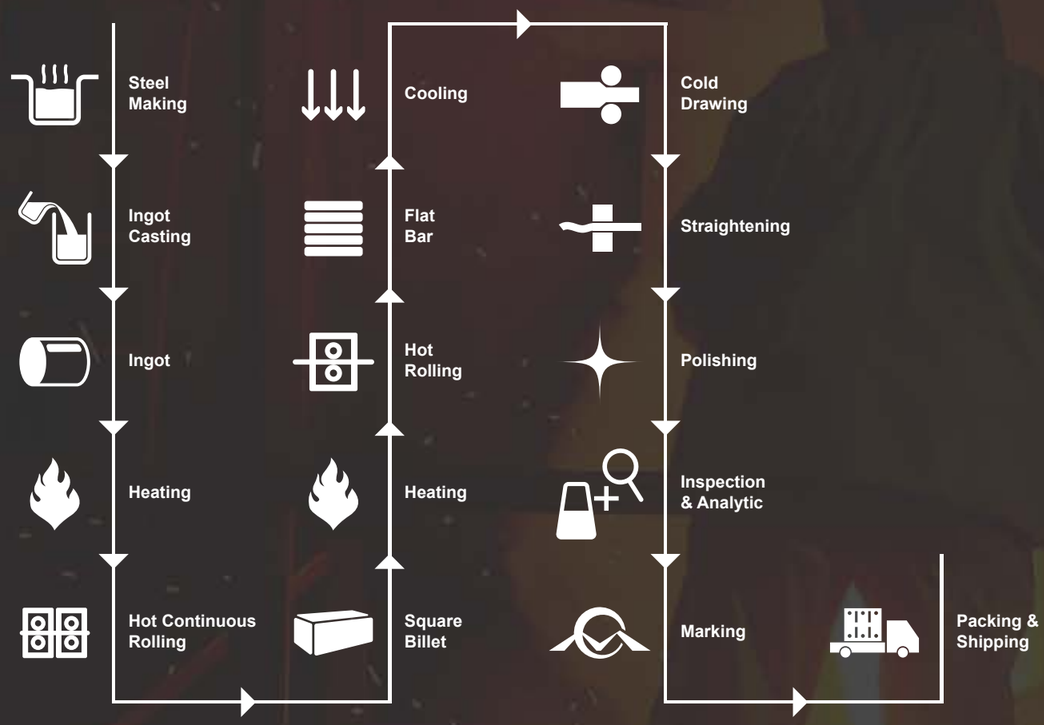
Features

Anti-corrosion (the degree is susceptible to the alloys contained), heat-resistance, good cold and hot working properties, good toughness, good comprehensive performances and wide application.

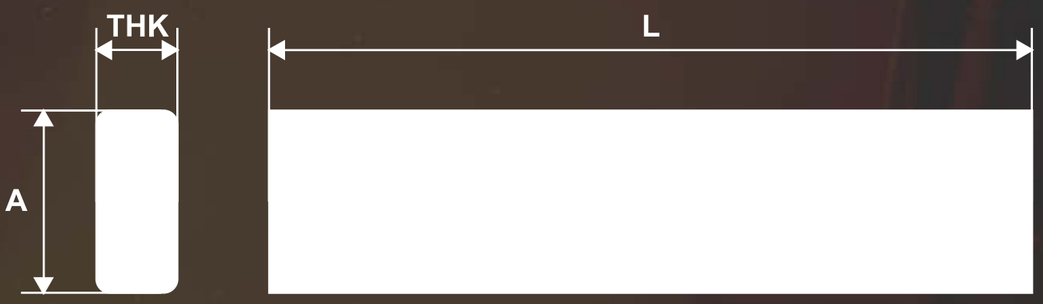
Standards

ASTM A276, ASTM A484M, DIN174, EN 10278

Manufacturing Process



Drawing & Formula



Formula:

m = A (mm) × THK (mm) × L (m) × 0.00793

* For 316, 316L, 310S, 309S, etc., ratio=0.00798. For 400 series stainless steel, ratio=0.00775

A = Side width, THK = Thickness, L = Length

Tolerance

Tolerance for Hot Rolled Flat Bars

Size	Tolerance Rank		
	Group 1	Group 2	Group 3
>7 ~ ≤20	±0.25	±0.35	±0.40
>20 ~ ≤30	±0.30	±0.40	±0.50
>30 ~ ≤50	±0.40	±0.50	±0.60
>50 ~ ≤80	±0.60	±0.70	±0.80
>80 ~ ≤110	±0.90	±1.00	±1.10
>110 ~ ≤150	±1.20	±1.30	±1.40

Tolerance for Hot Forging Flat Bars

Size	Tolerance Rank	
	Group 1	Group 2
>50 ~ ≤60	+1.5 -1.0	+2.0 -1.0
>60 ~ ≤80	+2.0 -1.0	+2.5 -1.0
>80 ~ ≤100	+2.5 -1.0	+3.0 -1.0
>100 ~ ≤120	+2.5 -1.5	+3.0 -1.5
>120 ~ ≤140	+3.0 -1.5	+3.5 -1.5
>140 ~ ≤160	+3.0 -2.0	+4.0 -2.0
>160 ~ ≤180	+4.0 -2.0	+5.0 -2.0
>180 ~ ≤200	+5.0 -2.0	+6.0 -2.0
>200 ~ ≤220	+5.0 -3.0	+6.0 -3.0
>220 ~ ≤240	+6.0 -3.0	+7.0 -3.0
>240 ~ ≤250	+7.0 -3.0	+8.0 -3.0
>250 ~ ≤300	+8.0 -3.0	+9.0 -3.0

Tolerance for Cold Drawn Flat Bars

Size	Tolerance Rank					
	H8	H9	H10	H11	H12	H13
3	0 ~ -0.014	0 ~ -0.025	0 ~ -0.040	0 ~ -0.060	0 ~ -0.100	0 ~ -0.140
>3 ~ ≤6	0 ~ -0.018	0 ~ -0.030	0 ~ -0.048	0 ~ -0.075	0 ~ -0.120	0 ~ -0.180
>6 ~ ≤10	0 ~ -0.022	0 ~ -0.036	0 ~ -0.058	0 ~ -0.090	0 ~ -0.150	0 ~ -0.220
>10 ~ ≤18	0 ~ -0.027	0 ~ -0.043	0 ~ -0.070	0 ~ -0.110	0 ~ -0.180	0 ~ -0.270
>18 ~ ≤30	0 ~ -0.033	0 ~ -0.052	0 ~ -0.084	0 ~ -0.130	0 ~ -0.210	0 ~ -0.330
>30 ~ ≤50	0 ~ -0.039	0 ~ -0.062	0 ~ -0.100	0 ~ -0.160	0 ~ -0.250	0 ~ -0.390
>50 ~ ≤80	0 ~ -0.046	0 ~ -0.074	0 ~ -0.120	0 ~ -0.190	0 ~ -0.300	0 ~ -0.460

Delivery State

Delivery State Choice	Surface Condition
Forged	
Hot Rolled	Pickled
	Sand Blasting
Cold Drawn	Bright

Note: 1. If you require different deliver state than the above listed, kindly confirm with us.
2. In case of any enquiry or order, please kindly let us know any extra requirement not indicated here.

CIVMATS

Angle
Bar

Specifications

• Equal Angle Bar Dimensions: (mm)
20×20×3;
25×25×3, 25×25×4;
30×30×3, 30×30×4, 30×30×5, 30×30×6;
40×40×3, 40×40×4, 40×40×5, 40×40×6;
50×50×4, 50×50×5, 50×50×6;
60×60×5, 60×60×6;
65×65×5, 65×65×6, 65×65×7, 65×65×8;
70×70×6, 70×70×7, 70×70×8;
75×75×6, 75×75×7, 75×75×8, 75×75×9;
80×80×8, 80×80×9, 80×80×10;
100×100×8, 100×100×9, 100×100×10,
100×100×12
*Size 100x100 above until 150x150 can be customized.
• Hot-selling Products:
a. Stainless Steel Hot Rolled Angle Bar
b. Stainless Steel Pickled Angle Bar

Standards

ASTM A276, ASTM A484M, DIN 1028, EN10056, GB4227

Introduction

Stainless steel angle bars are L-shape bars with two side widths perpendicular to each other. The two widths can be equal, known as SS equal angle bars; Unequal angle bars, hence, refer to SS angle bars with different side widths. Stainless steel angle bars can be used as stress components with different structures or as stainless steel adapting pieces, hence they are required to have good weldability, plastic formability and appropriate tensile strength. Stainless steel angle bars are hot rolled and pickled, widely applied in various building structures and engineering structures such as house beams, bridges, power transmission tower, shipyard etc.

Features

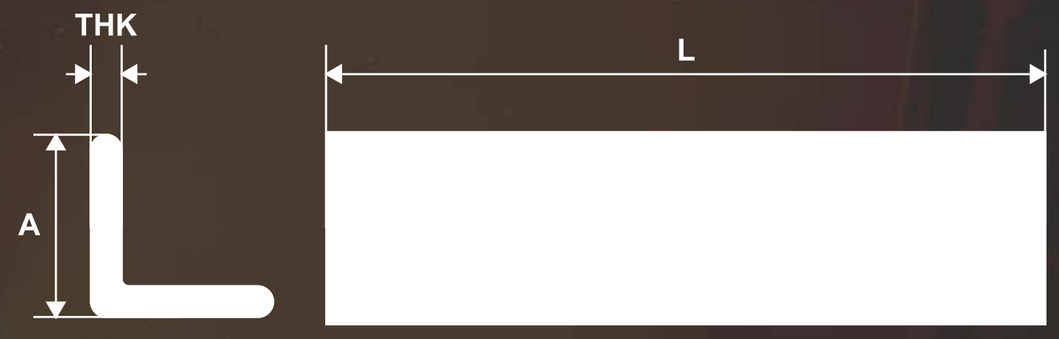
Anti-corrosion (the degree is susceptible to the alloys contained), heat-resistance, good cold and hot working properties, good toughness, good comprehensive performances and wide application.

Applications

Home appliances, electric appliances, construction materials, medical equipment, auto parts, petroleum, chemical application, agricultural irrigation, edible oil refinery factories, paper plants, shipyard, nuclear power plant etc.

Manufacturing Process

Drawing & Formula



Formula:

m = (A × 2 - THK) × THK × L (m) × 0.00793

* For 316, 316L, 310S, 309S, etc., ratio=0.00798. For 400 series stainless steel, ratio=0.00775

A = Side width, THK = Thickness, L = Length

Size & Tolerance

Size Range

Hot-rolled equal-leg angle bar							
Designation	Mass	Designation	Mass	Designation	Mass	Designation	Mass
20x20x3	0.88	70x70x5	5.37	120x120x8	14.7	180x180x16	43.5
25x25x3	1.12	70x70x6	6.38	120x120x9	16.5	180x180x17	46.0
25x25x4	1.45	70x70x7	7.38	120x120x10	18.2	180x180x18	48.6
25x25x5	1.78	70x70x8	8.37	120x120x11	19.9	180x180x19	51.1
30x30x3	1.36	70x70x9	9.32	120x120x12	21.6	180x180x20	53.7
30x30x4	1.78	70x70x10	10.3	120x120x13	23.3	200x200x13	39.8
30x30x5	2.18	75x75x4	4.65	120x120x14	25.0	200x200x14	42.7
35x35x3	1.60	75x75x5	5.76	120x120x15	26.6	200x200x15	45.6
35x35x3.5	1.85	75x75x6	6.85	120x120x16	28.3	200x200x16	48.5
35x35x4	2.09	75x75x7	7.93	130x130x8	16.0	200x200x17	51.4
35x35x5	2.57	75x75x8	8.99	130x130x9	17.9	200x200x18	54.3
38x38x4.5	2.56	75x75x9	10.0	130x130x10	19.8	200x200x19	57.1
38x38x6	3.33	75x75x10	11.1	130x130x11	21.7	200x200x20	59.9
40x40x3	1.84	76x76x5	5.84	130x130x12	23.6	200x200x21	62.8
40x40x4	2.42	76x76x6.5	7.49	130x130x13	25.4	200x200x22	65.6
40x40x5	2.97	76x76x8	9.11	130x130x14	27.2	200x200x23	68.3
40x40x6	3.52	76x76x9.5	10.7	130x130x15	29.0	200x200x24	71.1
45x45x3	2.09	80x80x5	6.17	130x130x16	30.8	200x200x25	73.9
45x45x4	2.74	80x80x6	7.34	140x140x9	19.3	200x200x26	76.6
45x45x4.5	3.06	80x80x7	8.49	140x140x10	21.4	200x200x27	79.3
45x45x5	3.38	80x80x8	9.63	140x140x11	23.4	200x200x28	82.0
45x45x6	4.00	80x80x9	10.8	140x140x12	25.4	250x250x17	64.4
45x45x7	4.60	80x80x10	11.9	140x140x13	27.5	250x250x18	68.1
50x50x3	2.33	90x90x5	6.97	140x140x14	29.4	250x250x19	71.7
50x50x4	3.06	90x90x6	8.30	140x140x15	31.4	250x250x20	75.3
50x50x5	3.77	90x90x7	9.61	140x140x16	33.3	250x250x21	78.9
50x50x6	4.47	90x90x8	10.9	140x140x18	37.2	250x250x22	82.5
50x50x7	5.15	90x90x9	12.2	150x150x10	23.0	250x250x23	86.1
50x50x8	5.82	90x90x10	13.4	150x150x11	25.2	250x250x24	89.7
50x50x9	6.47	90x90x11	14.7	150x150x12	27.3	250x250x25	93.2
55x55x4	3.38	90x90x16	20.7	150x150x13	29.5	250x250x26	96.7
55x55x5	4.18	100x100x6	9.26	150x150x14	31.6	250x250x27	101
55x55x6	4.95	100x100x7	10.7	150x150x15	33.8	250x250x28	104
60x60x4	3.70	100x100x8	12.2	150x150x16	35.9	250x250x29	107
60x60x5	4.57	100x100x9	13.6	150x150x17	38.0	250x250x30	111
60x60x6	5.42	100x100x10	15.0	150x150x18	40.1	250x250x31	114
60x60x7	6.26	100x100x11	16.4	150x150x19	42.1	250x250x32	118
60x60x8	7.09	100x100x12	17.8	150x150x20	44.2	250x250x33	121
60x60x10	8.69	100x100x13	19.2	160x160x12	29.3	250x250x34	124
63x63x5	4.82	100x100x14	20.6	160x160x13	31.6	250x250x35	128
63x63x6	5.72	100x100x15	21.9	160x160x14	33.9	300x300x25	112
63x63x6.5	6.17	100x100x16	23.2	160x160x15	36.2	300x300x26	116
65x65x4	4.02	110x110x6	10.2	160x160x16	38.4	300x300x27	121
65x65x5	4.97	110x110x7	11.8	160x160x17	40.7	300x300x28	125
65x65x6	5.91	110x110x8	13.4	160x160x18	42.9	300x300x29	129
65x65x7	6.83	110x110x9	15.0	160x160x19	45.1	300x300x30	133
65x65x8	7.73	110x110x10	16.6	160x160x20	47.3	300x300x31	138
65x65x9	8.62	110x110x11	18.2	180x180x13	35.7	300x300x32	142
65x65x10	9.49	110x110x12	19.7	180x180x14	38.3	300x300x33	146
65x65x11	10.3	120x120x7	12.9	180x180x15	40.9		

Hot-rolled unequal-leg angle bar							
Designation	Mass	Designation	Mass	Designation	Mass	Designation	Mass
30x20x3	**1.12**	**100x50x6**	**6.84**	**125x75x8**	**12.2**	150x90x10	18.2
30x20x4	**1.46**	**100x50x8**	**8.97**	**125x75x10**	**15.0**	150x90x11	19.9
40x20x4	**1.77**	**100x65x7**	**8.77**	**125x75x12**	**17.8**	150x90x12	21.6
40x25x4	**1.93**	**100x65x8**	**9.94**	**130x90x10**	**16.6**	150x90x15	26.6
45x30x4	**2.25**	**100x65x9**	**11.1**	**130x90x12**	**19.7**	150x100x10	19.0
50x30x5	**2.96**	**100x65x10**	**12.3**	**130x90x14**	**22.8**	150x100x12	22.5
60x30x5	**3.36**	**100x65x11**	**13.4**	**135x65x8**	**12.2**	150x100x14	26.1
60x40x5	**3.76**	**100x65x12**	**14.5**	**135x65x10**	**15.0**	200x100x10	23.0
60x40x6	**4.46**	**100x75x8**	**10.6**	**140x90x8**	**14.0**	200x100x12	27.3
65x50x5	**4.35**	**100x75x10**	**13.0**	**140x90x10**	**17.4**	200x100x14	31.6
70x50x6	**5.41**	**100x75x12**	**15.4**	**140x90x12**	**20.6**	200x100x15	33.8
75x50x6	**5.65**	**110x70x10**	**13.4**	**140x90x14**	**23.8**	200x100x16	35.9
75x50x8	**7.39**	**110x70x11**	**15.9**	**150x75x9**	**15.4**	200x150x12	32.0
80x40x6	**5.41**	**120x80x8**	**12.2**	**150x75x10**	**17.0**	200x150x15	39.6
80x40x8	**7.07**	**120x80x10**	**15.0**	**150x75x12**	**20.2**		
80x60x7	**7.36**	**120x80x12**	**17.8**	**150x75x15**	**24.8**		

Tolerance

Side Width	Tolerance for Width	Thickness							
		3	4	5	6	7	8	9	10
		Tolerance for Thickness							
20	±1.5	±0.4							
25	±1.5	±0.5	±0.5						
30	±2.0	±0.5	±0.5	±0.5	±0.5				
40	±2.0	±0.6	±0.6	±0.6	±0.6				
50	±2.0		±0.6	±0.6	±0.6				
60	±3.0			±0.6	±0.6				
65	±3.0			±0.6	±0.6	±0.7	±0.7		
70	±3.0				±0.7	±0.7	±0.7		
75	±3.0				±0.7	±0.7	±0.7	±0.7	
80	±3.0				±0.7	±0.7	±0.7	±0.7	
90	±3.0						±0.7	±0.7	±0.8
100	±4.0						±0.7	±0.7	±0.8

Delivery State

Delivery State Choice	Surface Condition
Hot Rolled	Pickled
	Sand Blasting
	Polished

Note: 1. If you require different deliver state than the above listed, kindly confirm with us.
2. In case of any enquiry or order, please kindly let us know any extra requirement not indicated here.

Square Bar

Specifications

• Dimension: 3mm - 180mm
• Delivery State: Cold Drawn, Hot Rolled, Grinding, Forged, Centerless Grinding
• Finish: Polished, Bright, Hairline, Grinded, Sandblast, Pickled, Mill Finish

Standards

ASTM A276, ASTM A484M, ASTM A582, DIN 178, DIN1014, EN 10059, EN10278

Applications

Home appliances, electric appliances, construction materials, medical equipment, auto parts, petroleum, chemical application, agricultural irrigation, edible oil refinery factories, paper plants, shipyard, nuclear power plant etc.

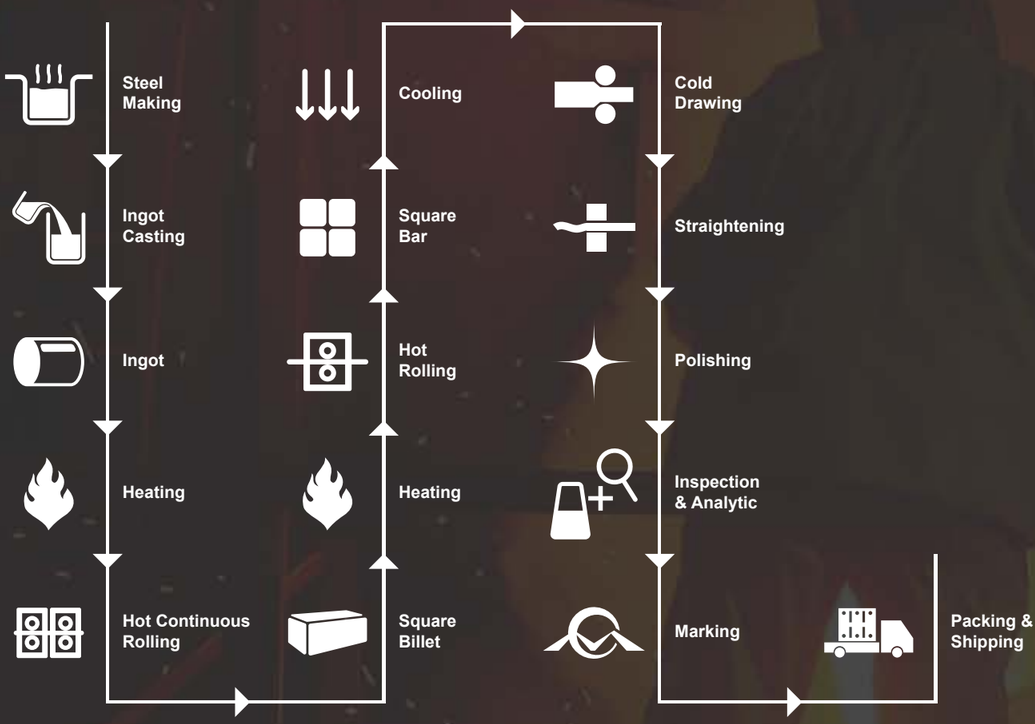
Introduction

Stainless steel square bars are long stainless steel products with its cross section as square. At Civmats, we produce SS square bars in cold drawn, hot rolled, and hot forged conditions as per your request. The main ASTM standards for stainless steel square bar production we follow are A276, A479, A182 and A484. Normally, Size 50×50mm and below are cold drawn square bars by default; from size 50×50mm to size 80×80mm we can do both cold drawn and hot rolled stainless square bar. For size 80×80mm above we will produce hot rolled/forged SS square bars by default. We can supply multiple sizes and various grades to cater for your special demand. Customization, whether in terms of size or grade, is acceptable with the minimum order quantity above 1 ton. Our stainless steel square bars are good materials for manufacturing machined components or used as connecting pieces.

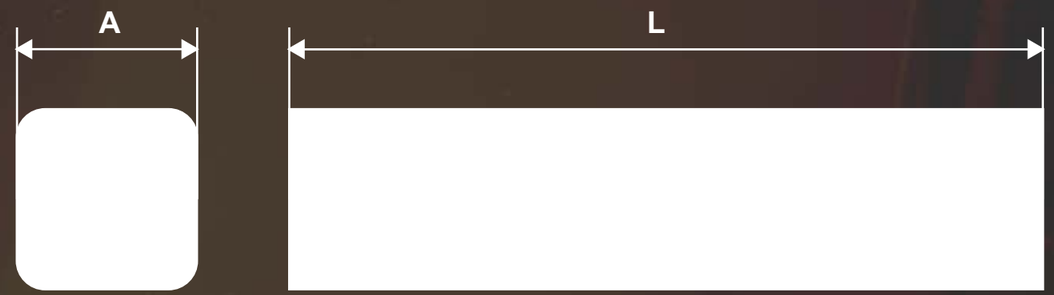
Features

Anti-corrosion (the degree is susceptible to the alloys contained), heat-resistance, good cold and hot working properties, good toughness, good comprehensive performances and wide application.

Manufacturing Process



Drawing & Formula



Formula:

m = A (mm) × A (mm) × L (m) × 0.00793

* For 316, 316L, 310S, 309S, etc., ratio=0.00798. For 400 series stainless steel, ratio=0.00775

A = Side width, L = Length

Tolerance

Tolerance for Hot Rolled Square Bars

Size	Tolerance Rank		
	Group 1	Group 2	Group 3
>7 ~ ≤20	±0.25	±0.35	±0.40
>20 ~ ≤30	±0.30	±0.40	±0.50
>30 ~ ≤50	±0.40	±0.50	±0.60
>50 ~ ≤80	±0.60	±0.70	±0.80
>80 ~ ≤110	±0.90	±1.00	±1.10
>110 ~ ≤150	±1.20	±1.30	±1.40

Tolerance for Hot Forging Square Bars

Size	Tolerance Rank	
	Group 1	Group 2
>50 ~ ≤60	+1.5 -1.0	+2.0 -1.0
>60 ~ ≤80	+2.0 -1.0	+2.5 -1.0
>80 ~ ≤100	+2.5 -1.0	+3.0 -1.0
>100 ~ ≤120	+2.5 -1.5	+3.0 -1.5
>120 ~ ≤140	+3.0 -1.5	+3.5 -1.5
>140 ~ ≤160	+3.0 -2.0	+4.0 -2.0
>160 ~ ≤180	+4.0 -2.0	+5.0 -2.0
>180 ~ ≤200	+5.0 -2.0	+6.0 -2.0
>200 ~ ≤220	+5.0 -3.0	+6.0 -3.0
>220 ~ ≤240	+6.0 -3.0	+7.0 -3.0
>240 ~ ≤250	+7.0 -3.0	+8.0 -3.0
>250 ~ ≤300	+8.0 -3.0	+9.0 -3.0

Tolerance for Cold Drawn Square Bars

Size	Tolerance Rank					
	H8	H9	H10	H11	H12	H13
3	0 ~ -0.014	0 ~ -0.025	0 ~ -0.040	0 ~ -0.060	0 ~ -0.100	0 ~ -0.140
>3 ~ ≤6	0 ~ -0.018	0 ~ -0.030	0 ~ -0.048	0 ~ -0.075	0 ~ -0.120	0 ~ -0.180
>6 ~ ≤10	0 ~ -0.022	0 ~ -0.036	0 ~ -0.058	0 ~ -0.090	0 ~ -0.150	0 ~ -0.220
>10 ~ ≤18	0 ~ -0.027	0 ~ -0.043	0 ~ -0.070	0 ~ -0.110	0 ~ -0.180	0 ~ -0.270
>18 ~ ≤30	0 ~ -0.033	0 ~ -0.052	0 ~ -0.084	0 ~ -0.130	0 ~ -0.210	0 ~ -0.330
>30 ~ ≤50	0 ~ -0.039	0 ~ -0.062	0 ~ -0.100	0 ~ -0.160	0 ~ -0.250	0 ~ -0.390
>50 ~ ≤80	0 ~ -0.046	0 ~ -0.074	0 ~ -0.120	0 ~ -0.190	0 ~ -0.300	0 ~ -0.460

Delivery State

Delivery State Choice	Surface Condition
Forged	
Hot Rolled	Pickled
	Sand Blasting
Cold Drawn	Bright

Note: 1. If you require different deliver state than the above listed, kindly confirm with us.
2. In case of any enquiry or order, please kindly let us know any extra requirement not indicated here.

CIVMATS

Hexagon
Bar

Specifications

- Dimension: 6mm-80mm
- Delivery State: Cold Drawn

Standards

ASTM A276, ASTM A484M, DIN 176, EN10278

Features

Anti-corrosion (the degree is susceptible to the alloys contained), heat-resistance, good cold and hot working properties, good toughness, good comprehensive performances and wide application.

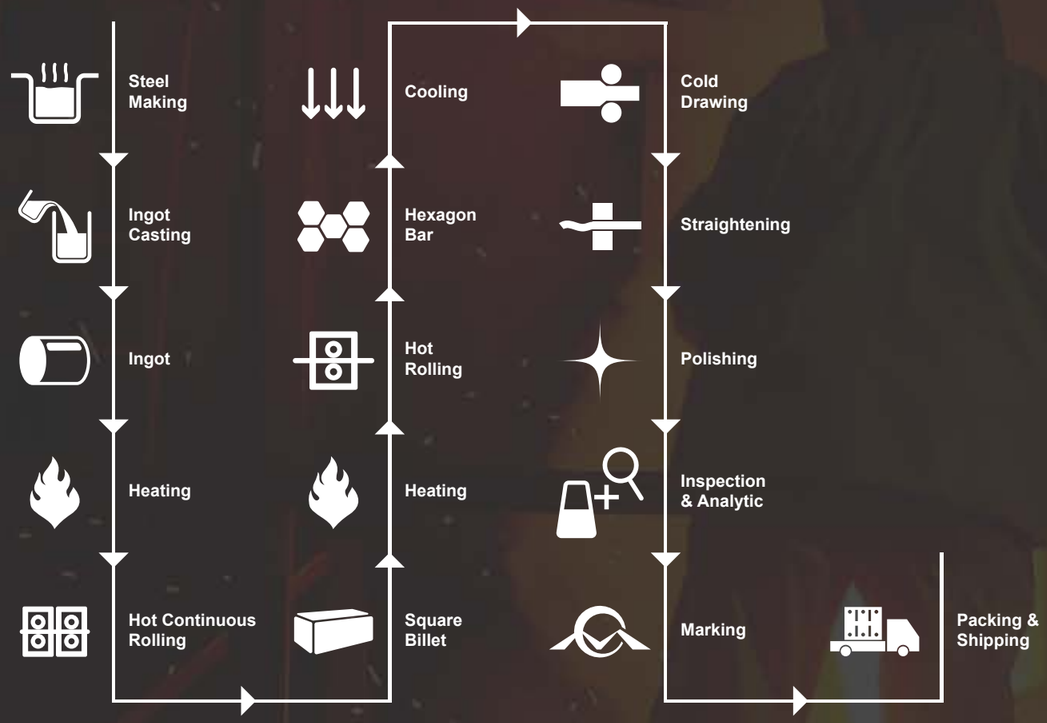
Introduction

Stainless steel hex bar is solid stainless steel long product with its cross section as hexagonal. Civmats produce stainless hex bars in multiple sizes and various grades. The most commonly applied specification is ASTM A276, which includes both hot-finished and cold-finished bars. Due to its good features such as 1) high precision (tolerance can be ±0.01mm at minimum), 2) bright and smooth finish, 3) corrosion resistance, high tensile strength and anti-fatigue strength, stainless steel hex bars are widely used for producing machined components such as hex bolts, hex nuts and hex plugs. In addition, SS hex bars are used for auto parts, elevators, kitchenware, pressure vessels and other promising industries for they are environment friendly and for their long service life.

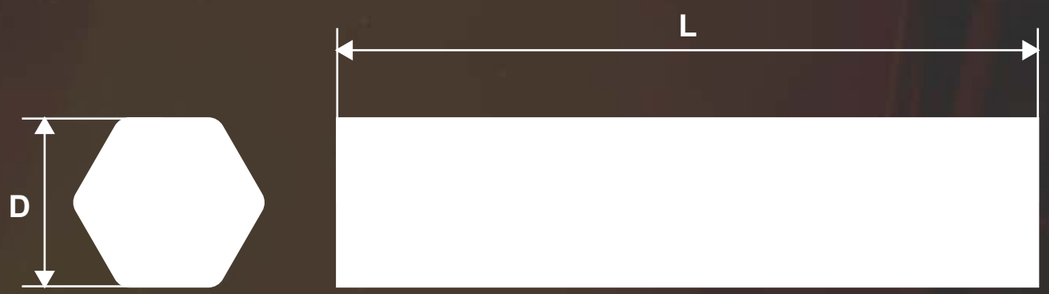
Applications

Home appliances, electric appliances, construction materials, medical equipment, auto parts, petroleum, chemical application, agricultural irrigation, edible oil refinery factories, paper plants, shipyard, nuclear power plant etc.

Manufacturing Process



Drawing & Formula



Formula:

m = D (mm) × D (mm) × L (m) × 0.00686

D = Diameter between two adjacent side width, L = Length

Tolerance

Tolerance for Hot Rolled Hexagon Bars

Size	Tolerance Rank		
	Group 1	Group 2	Group 3
8 ~ 20	±0.25	±0.35	±0.40
21 ~ 30	±0.30	±0.40	±0.50
30 ~ 50	±0.40	±0.50	±0.60
50 ~ 70	±0.60	±0.70	±0.80

Tolerance for Cold Drawn Hexagon Bars

Size	Tolerance Rank					
	H8	H9	H10	H11	H12	H13
3	0 ~ -0.014	0 ~ -0.025	0 ~ -0.040	0 ~ -0.060	0 ~ -0.100	0 ~ -0.140
>3 ~ ≤6	0 ~ -0.018	0 ~ -0.030	0 ~ -0.048	0 ~ -0.075	0 ~ -0.120	0 ~ -0.180
>6 ~ ≤10	0 ~ -0.022	0 ~ -0.036	0 ~ -0.058	0 ~ -0.090	0 ~ -0.150	0 ~ -0.220
>10 ~ ≤18	0 ~ -0.027	0 ~ -0.043	0 ~ -0.070	0 ~ -0.110	0 ~ -0.180	0 ~ -0.270
>18 ~ ≤30	0 ~ -0.033	0 ~ -0.052	0 ~ -0.084	0 ~ -0.130	0 ~ -0.210	0 ~ -0.330
>30 ~ ≤50	0 ~ -0.039	0 ~ -0.062	0 ~ -0.100	0 ~ -0.160	0 ~ -0.250	0 ~ -0.390
>50 ~ ≤80	0 ~ -0.046	0 ~ -0.074	0 ~ -0.120	0 ~ -0.190	0 ~ -0.300	0 ~ -0.460

Delivery State

Delivery State Choice	Surface Condition
Hot Rolled	Polished
	Pickled
	Sand Blasting
Cold Drawn	Polished

Note: 1. If you require different deliver state than the above listed, kindly confirm with us.
2. In case of any enquiry or order, please kindly let us know any extra requirement not indicated here.

CIVMATS

Channel Bar

Specifications

A. Delivery State: Hot Rolled
• Dimensions: (mm)
Thickness: 4mm, 5mm, 6mm, 7mm
Height: 40mm, 50mm, 60mm
Width: 80mm, 100mm, 120mm
B. Delivery State: Welded
• Dimensions: (mm)
Thickness: 3mm, 4mm, 5mm, 6mm, 7mm, 8mm, 9mm, 10mm, 12mm
Height: 25mm, 30mm, 40mm, 50mm, 60mm, 70mm, 75mm, 80mm, 100mm
Width: 50mm -245mm
• Tags: U Channel Bar, C Channel Bar

Standards

ASTM A276, ASTM A484M, DIN 1028, EN10279, EN10225, GB4227

Features

Anti-corrosion (the degree is susceptible to the alloys contained), heat-resistance, good cold and hot working properties, good toughness, good comprehensive performances and wide application.

Introduction

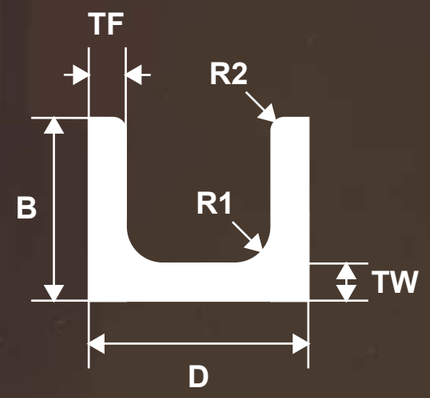
Stainless steel channel bar is stainless steel long product with its section as U shape. At Civmats, apart from stainless steel U channel, there are also stainless steel C channel, stainless steel I beam (also titled as H channel) for your different choices. These channel bars all belong to structural steel, extensively used for structural support where greater tensile strength and good corrosion resistance are required. Stainless steel channel bars feature durable dull grainy mill finish, sand blast finish, brush finish or even polished finish according to your requirement. For sizes below 60 x 120 x 7 mm, they are hot rolled channel bars by default, above which they are laser fused or press bending channel bars. The supply of SS channel bars from Civmats comes in multiple sizes and various grades. The main grades are 304(L), 316(L), 310S, 2205 and the main standard is ASTM A 276. Apart from ASTM standards, we can also produce as per JIS, DIN, GOST, GB standard as per your request. Length can be customized or as export standard length 5.8m or 6m.

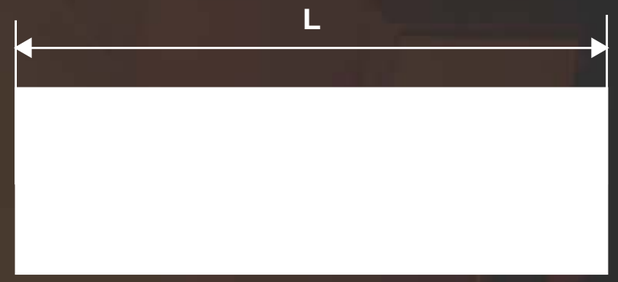
Applications

Home appliances, electric appliances, construction materials, medical equipment, auto parts, petroleum, chemical application, agricultural irrigation, edible oil refinery factories, paper plants, shipyard, nuclear power plant etc.

Manufacturing Process

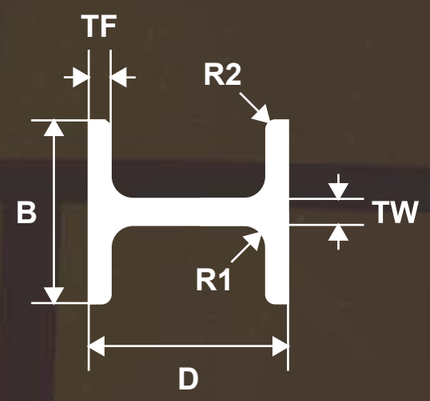
Drawing & Formula





Formula:

m = [D × TW + 2 × TF × (B - TW) + 0.349 × (R1 × R1 - R2 × R2)] × L (m) × 0.0.00793



Formula:

m = [D × TW + 2 × TF × (B - TW) + 0.615 × (R1 × R1 - R2 × R2)] × L (m) × 0.0.00793

* For 316, 316L, 310S, 309S, etc., ratio=0.00798. For 400 series stainless steel, ratio=0.00775

D = Flange Depth, B = Flange Width, TW = Web Thickness, TF = Flange Thickness, R1 = Radius R1, R2 = Radius R2

Size & Tolerance

Size Range

Hot-rolled U channel bar					
Section	**Designation**	**Mass**	**Section**	**Designation**	**Mass**
UPE80	80*50*4.5*8	8.89	UPN65	65*42*5*7	7.09
UPE100	100*55*5*8.5	10.9	UPN80	80*45*6*8	8.64
UPE120	120*60*5.5*9	13.2	UPN100	100*50*6*8.5	10.6
UPE140	140*65*6*9.5	15.7	UPN120	120*55*7*9	13.4
UPE160	160*70*6.5*10	18.6	UPN140	140*60*7*10	16
UPE180	180*75*7*10.5	21.6	UPN160	160*65*7.5*10.5	18.8
UPE200	200*80*7.5*11	24.8	UPN180	180*70*8*11	22
UPE220	220*85*8*12	28.8	UPN200	200*75*8.5*11.5	25.3
UPE240	240*90*8.5*13	33.4	UPN220	220*80*9*12.5	29.4
UPE270	270*95*9*14	38.8	UPN240	240*85*9.5*13	33.2
UPE300	300*100*9.5*15	44.5	UPN260	260*90*10*14	37.9
UPE330	330*105*11*16	53.3	UPN280	280*95*10*15	41.8
UPE360	360*110*12*17	61.2	UPN300	300*100*10*16	46.2
UPE400	400*115*13.5*18	72.3	UPN320	320*100*14*17.5	59.5
UPN30	30*33*5*7	4.27	UPN350	350*100*14*16	60.6
UPN40	40*35*5*7	4.87	UPN380	380*102*13.5*16	63.1
UPN50	50*38*5*7	5.59	UPN400	400*110*14*18	71.8
Hot-rolled H beam bar					
Section	**Designation**	**Mass**	**Section**	**Designation**	**Mass**
HEA100	96*100*5*8	16.7	HEB100	100*100*6*10	20.4
HEA120	114*120*5*8	19.9	HEB120	120*120*6.5*11	26.7
HEA140	133*140*5.5*8.5	24.7	HEB140	140*140*7*12	33.7
HEA160	152*160*6*9	30.4	HEB160	160*160*8*13	42.6
HEA180	171*180*6*9.5	35.5	HEB180	180*180*8.5*14	51.2
HEA200	190*200*6.5*10	42.3	HEB200	200*200*9*15	61.3
HEA220	210*220*7*11	50.5	HEB220	220*220*9.5*16	71.5
HEA240	230*240*7.5*12	60.3	HEB240	240*240*10*17	83.2
HEA260	250*260*7.5*12.5	68.2	HEB260	260*260*10*17.5	93
HEA280	270*280*8*13	76.4	HEB280	280*280*10.5*18	103
HEA300	290*300*8.5*14	88.3	HEB300	300*300*11*19	117
HEA320	310*300*9*15.5	97.6	HEB320	320*300*11.5*20.5	127

HEA340	330*300*9.5*16.5	105	HEB340	340*300*12*21.5	134
HEA360	350*300*10*17.5	112	HEB360	360*300*12.5*22.5	142
HEA400	390*300*11*19	125	HEB400	400*300*13.5*24	155
HEA450	440*300*11.5*21	140	HEB450	450*300*14*26	171
HEA500	490*300*12*23	155	HEB500	500*300*14.5*28	187
HEA550	540*300*12.5*24	166	HEB550	550*300*15*29	199
HEA600	590*300*13*25	178	HEB600	600*300*15.5*30	212
HEA650	640*300*13.5*26	190	HEB650	650*300*16*31	225
HEA700	690*300*14.5*27	204	HEB700	700*300*17*32	241
HEA800	790*300*15*28	224	HEB800	800*300*17.5*33	262
HEA900	890*300*16*30	252	HEB900	900*300*18.5*35	291
HEA1000	990*300*16.5*31	272	HEB1000	1000*300*19*36	314
INP80	80*42*3.9*5.9	5.94	IPE120	120*64*4.4*6.3	10.4
INP100	100*50*4.5*6.8	8.34	IPE140	140*73*4.7*6.9	12.9
INP120	120*58*5.1*7.7	11.1	IPE160	160*82*5*7.4	15.8
INP140	140*66*5.7*8.6	14.3	IPE180	180*91*5.3*8	18.8
INP160	160*74*6.3*9.5	17.9	IPE200	200*100*5.6*8.5	22.4
INP180	180*82*6.9*10.4	21.9	IPE220	220*110*5.9*9.2	26.2
INP200	200*90*7.5*11.3	26.2	IPE240	240*120*6.2*9.8	30.7
INP220	220*98*8.1*11.2	31.1	IPE270	270*135*6.6*10.2	36.1
INP240	240*106*8.7*13.1	36.2	IPE300	300*150*7.1*10.7	42.2
INP260	260*113*9.4*14.1	41.9	IPE330	330*160*7.5*11.5	49.1
INP280	280*119*10.1*15.2	47.9	IPE360	360*170*8*12.7	57.1
INP300	300*125*10.8*16.2	54.2	IPE400	400*180*8.6*13.5	66.3
INP320	320*131*11.5*17.3	61	IPE450	450*190*9.4*14.6	77.6
INP340	340*137*12.2*18.3	68	IPE500	500*200*10.2*16	90.7
INP360	360*143*13*19.5	76.1	IPE550	550*210*11.1*17.2	106
INP380	380*149*13.7*20.5	84	IPE600	600*220*12*19	122
INP400	400*155*14.4*21.6	92.4	IPE750*137	753*263*11*17	137
INP425	425*163*15.3*21	104	IPE750*146	756*263.5*11.5*18.5	146
INP450	450*170*16.2*24.3	115	IPE750*160	761*264*12*21	160
INP475	475*178*17.1*26	128	IPE750*172	764*265*13*22.5	172
INP500	500*185*18*27	141	IPE750*183	768*265.5*13.5*24.5	183
INP550	550*200*19*30	166	IPE750*195	772*266*14*26.5	195
INP600	600*215*21.6*32.4	199	IPE750*207	775*267*15*28	207
IPE80	80*46*3.8*5.2	6	IPE750*219	778*268*16*29.5	219
IPE100	100*55*4.1*5.7	8.1			

Tolerance

Specified Size of Stainless Channels, mm	Size Tolerances, Over and Under, mm.				
	Flange Depth	Flange Width	Web Thickness for Thickness Given		Out-of-Square B of Either Flange, mm/ mm of Flange Width
			To 5.00mm	Over 5.00mm	
To 38.00mm, incl.	1.20	1.20	0.41	0.60	1.20
Over 38.00 to 75.00mm, excl.	2.40	2.40	0.60	0.80	1.20

Delivery State

Delivery State Choice	Surface Condition
Hot Rolled	Pickled
	Sand Blasting
Welding	Pickled
	Sand Blasting
Press Bending	Pickled
	Sand Blasting
	No.1 Finish

Note: 1. If you require different deliver state than the above listed, kindly confirm with us.
2. In case of any enquiry or order, please kindly let us know any extra requirement not indicated here.

FAQ

Q: What is Your MOQ (Minimum Order Quantity)?

A: Our MOQ is 1 ton. Larger quantity, lower price.

Q: How about the delivery time?

A: Normally 25 days, but it is also influenced by your specific requirements or the order quantity.

Q: Is sample available?

A: Yes. For small piece, free sample of common size is available, but the freight will be yours to bear. For large sample, the sample cost paid will be deducted from the order amount. Please kindly confirm with our sales for your specific requirement.

Q: Can I send our engineers to China?

A: Of course. Welcome to our factory for on-the-spot inspection.

Q: How do you control the quality of your product?

A: Each production procedure will be subject to test and evaluation, from the very choice of the raw materials to the package for shipment. Only the products surviving all the tests are delivered for export.

Q: Can you do SS grinding bar?

A: Yes we can do SS grinding bar featuring precise dimension, roundness and straightness, superior to stainless steel polished bars, but the processing cost is also higher.

Q: Can you polish SS flat bar to hairline finish?

A: Yes, we can. We can polish stainless steel flat bar to 180#, 320# and hairline finish for your different choice.

Q: What's the finish of the your stainless steel angle bar?

A: We have pickled and sand blasting finish for the majority of our SS angle bar orders. If you have special requirements such as polishing, we can also do it as per your request.

Q: Do you have cold drawn stainless steel square bars?

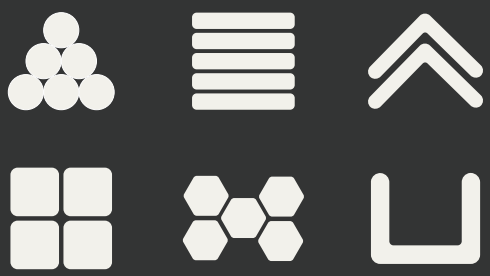
A: Yes, we produce cold drawn SS square bars with bright finish. Cold drawn SS square bars are more costly than hot rolled SS square bars, but with better mechanical properties.

Q: Can you make your stainless steel hex bar in round edge?

A: Yes, we can produce round-edge SS hex bar as per your request. You can also refer to our photos for better understanding.

Q: Can you provide hot-rolled stainless steel channel bar without welding?

A: It depends. Normally, the dimension range for hot-rolled SS channel bar is from 40 x 80 x 4 mm to 60 x 120 x 7mm. Beyond this range, we will do welding or press bending as per your request.



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