YAOSTEEL

Quality first,Reputation as the most important.

QUALITY,REPUTATION,
MANAGEMENT,SERVICE

2020

Stainless steel

Coil / Tube / Stirp

YAOYI

Quality First
Service-Sincerity
Management-Oriented
Reputation As The Most Important

Stainless steel

CATALOG

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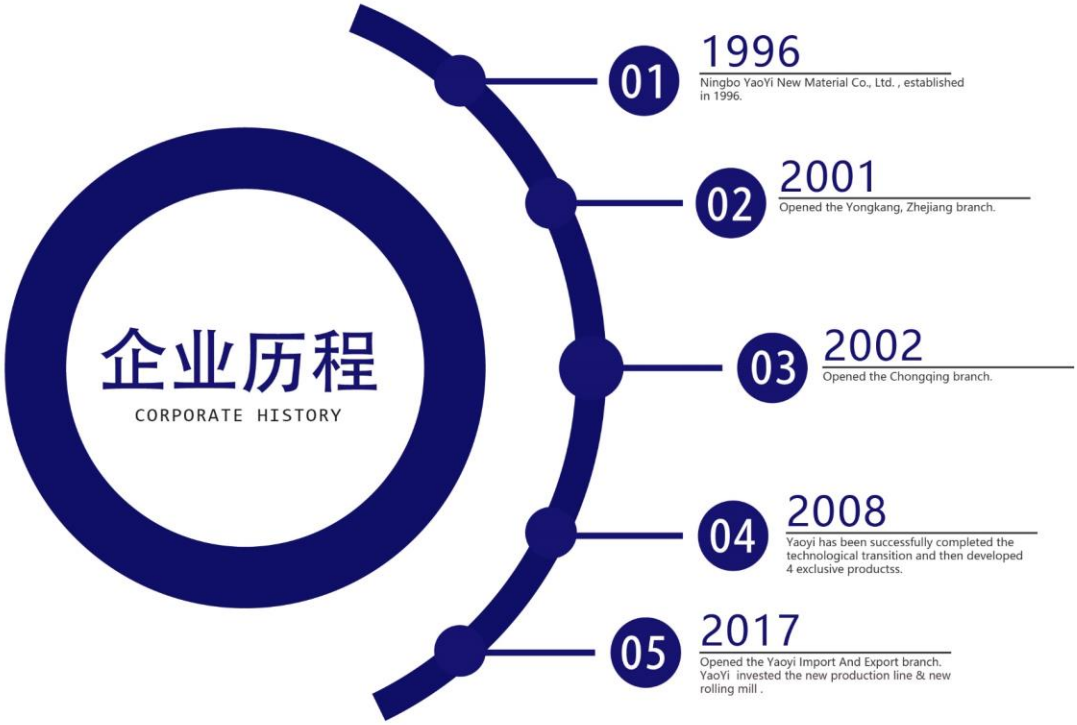
BRIEF PROFILE

Founded in 1996. “Want(YAO) the No.1 (YI) quality” as its motto, YAOYI is situated on 50 acres in Ningbo, Zhejiang. The location is near a highway to Beilun port—the major port in the east of China. From J (200) series to High-Nickel Alloys (300 series) -utilizing the endless possibilities offered by metals, our goal is to rapidly respond to our customers to supply the finest stainless-steel products available.

YAOYI’s Quality Management System (QMS) is designed to meet the requirements of the ISO 9001:2008 Standard and all the facilities are ISO certified. Over the past 20 years, YAOYI has ensured an efficient operation that yields the highest quality steel and we will continually to supply our partners the unparalleled products and service.



Steel Strip & Coil

Stainless Steel Stirp 201

Chemical Compositon%	
Carbon(C)	≤0.15
Manganese(Mn)	5.5~7.5
Silicon(Si)	≤1.0
Chromium(Cr)	16.0~18.0
Nickl(Ni)	3.5~5.5

Mechanical Properties	
HV	≤200
EL(%)	≥40
Tensile Strength(Mpa)	≥635
Yield Strength(Mpa)	≥245
HRB	≤100

Type 201 have high tensile strengths.201 is a lower cost alternative to conventional Cr-Ni stainless steel such as 301, 304. Type 201 is essentially nonmagnetic in the annealed condition and becomes magnetic when cold worked.

Features

- Similar bending, forming and drawing characteristics with 301.
- Have good Resistance in mild to moderately corrosive environments
- Has been successfully substituted for 304 in many mild environments.

Applications

- Type 201 have successfully applied to submarine oil transportation pipelines.

Stainless Steel Stirp 202

Chemical Compositon%	
Carbon(C)	≤0.15
Manganese(Mn)	7.5~10.0
Sulphur(S)	≤0.03
Phosphorus(P)	≤0.06
Silicon(Si)	≤1.0
Chromium(Cr)	17.0~19.0
Nickl(Ni)	4.0~6.0

Mechanical Properties	
EL%	40
Young’s Modulus(Gpa)	0.29
Tensile Strength(Mpa)	≥ 550
Yield Strength(Mpa)	≥205
Brinell Hardness(HB)	≤217
Rockwell Hardness	≤95

The major differences between 202 and 304 stainless steels are in the nickel and chromium contents.

Features

- Lower cost substitute to 304
- High tensile strengths
- Good corrosion resistance in mildly corrosive environment

Applications

- Beer Barrels and Pressure Vessels
- Cooling Coils Cryogenic Vessels and Components
- Wire forming
- Chemical Equipment, Food Handling Equipment, and Kitchenware
- Evaporators, Still Tubes, Feed Water Tubing, and Oil Well Filter Screens

Steel Strip & Coil

Stainless Steel Stirp J1

Chemical Compositon%	
Carbon(C)	≤0.08
Manganese(Mn)	6.0~8.0
Sulphur(S)	≤0.015
Phosphorus(P)	≤0.07
Silicon(Si)	≤0.75
Chromium(Cr)	15.0~17.0
Nickl(Ni)	4.0~4.5

Mechanical Properties	
Grade	201 mid copper
EL%	≥20
Tensile Strength(Mpa)	≥635
Yield Strength(Mpa)	≥245
Density	7.93
Hardness HV	≤250

AUS(J1) is a low nickel chrome-manganese austenitic stainless steel. Modest amount of nitrogen added to this steel results in higher annealed strength than AISI-304. However, copper addition reduces work hardening rate to facilitate cold working/forming. J1 is relatively economical compared to AISI- 304 having formability and weldability comparable to 304 with corrosion resistance superior to 430.

Features

- Suitable for heavy duty operation.
- Minimum maintenance
- Nonmagnetic
- Long service life
- Non corrosive & heat resistant

Applications

- Automotive trim and molding/Difficult-to-form exhaust-system components, clamps
- Construction: Gutters and downspouts, roofing, siding.
- Kitchenware: Cooking utensils, dishwashers, ovens, range hoods, Refrigerators, Skewers.
- Power generation: Heat Exchanger tubing.

Stainless Steel Stirp J3

Chemical Compositon%	
Carbon(C)	≤0.15
Manganese(Mn)	7.5~13
Sulphur(S)	≤0.03
Phosphorus(P)	≤0.045
Silicon(Si)	≤1.0
Chromium(Cr)	13.0~15.0
Nickl(Ni)	0.8~1.5

Mechanical Properties	
Density	7.93
EL%	≥20
Tensile Strength(Mpa)	≥635
Yield Strength(Mpa)	≥245
Poisson’ s ratio	0.75 max
Hardness HV	≤255

Applications

- Automotive trim and molding/Difficult-to-form exhaust-system components, tubular manifolds, mufflers/Exhaust manifold and other exhaust-system components, catalytic converter shells, clamps
- Construction: Gutters and downspouts, roofing, siding.
- Power generation: Heat Exchanger tubing.
- Kitchenware: Cooking utensils, dishwashers, ovens, range hoods, Refrigerators, Skewers.

Features

- Accurate dimension
- Suitable for heavy duty operation
- corrosive resistant
- heat resistant

Stainless Steel Stirp J4

Chemical Compositon%	
Carbon(C)	≤0.12
Manganese(Mn)	8.5~13.0
Sulphur(S)	≤0.015
Phosphorus(P)	≤0.045
Silicon(Si)	≤0.75
Chromium(Cr)	14.0~16.0
Nickl(Ni)	1.0~2.0

Mechanical Properties	
Grade	J4
EL%	≥40
Tensile Strength(Mpa)	≥650
Yield Strength(Mpa)	≥325
Hardness HV	≤220

J4 is 50% stronger than 304 as well as 430! J4 also exhibits superior wear and abrasion resistance than 304/430. The main difference between J4 & 304 is the difference in their chemistries, especially the percentage of Ni. 304 contains a minimum of 8% Ni and J4 has a minimum of only 1% Ni. The chromium content is also slightly lower, but as seen from the PRE, this is compensated to a large extent by increased nitrogen.

Features

- For heavy duty operation
- Sturdy build
- Excellent service life and heat-resistant
- Long service life
- Non corrosive & heat resistant

Applications

- Chemical processing: Oil refinery equipment, oil burner and heater parts
- Construction: Gutters and downspouts, roofing, siding.
- Farming:Dry fertilizer spreaders/Farm animal pens.
- Appliances: Hot water tanks, residential furnaces.

Stainless Steel Stirp Y6

Chemical Compositon%	
Carbon(C)	0.1~0.3
Manganese(Mn)	≤2.0
Sulphur(S)	≤0.03
Phosphorus(P)	≤0.035
Silicon(Si)	≤1.0
Chromium(Cr)	10.7~15
Nickl(Ni)	0.3~2.0

Mechanical Properties	
Density	0.12 max
Young’s Modulus(Gpa)	0.29
Tensile Strength(Mpa)	70 min
Yield Strength(Mpa)	2550 - 3650
Poisson’s ratio	0.75 max
Brinell Hardness(HB)	17.0~19.0

Y6 is a Hard state, austenitic stainless steel that is hardenable by heat treatment. Y6 has high tensile properties, Hardness HV intensity reaches 500.The company independently researches and develops products.

Features

- Excellent corrosion resistance in oxidizing environments such as dilute nitric acid.
- Resistant to aggressive organic acids like acetic and phosphoric.
- Can best be welded by resistance or shielded fusion methods.

Applications

- Stamping
- Spinning
- Wire forming
- Formed into all types of washers, springs, screens, and cables
- Food and beverage industry
- Pressure containing applications

Stainless Steel Stirp 301

Chemical Compositon%	
Carbon(C)	≤0.15
Manganese(Mn)	≤2.0
Sulphur(S)	≤0.03
Phosphorus(P)	≤0.035
Silicon(Si)	≤1.0
Chromium(Cr)	16.0~18.0
Nickl(Ni)	6.0~8.0

Mechanical Properties	
EL%	≥40
HV	≤200
Tensile Strength(Mpa)	≥520
Yield Strength(N/mm2)	≥205
HRB	≤90
Brinell Hardness(HB)	≤187

Stainless steel grade 301 is a commonly available austenitic stainless with good corrosion resistance and elevated carbon to allow for cold working to a variety of tempers. It can be obtained in the 1/4 hard, 1/2 hard, and full hard.

Features

- Good resistance in mildly corrosive conditions
- 301 has similar weldability to the most common stainless alloys
- Heat resistance up to 1600°F(871°C)
- Hardens at high rate, creating a very high strength from cold rolling and from roll forming.

Applications

- Arcraft structural parts
- Roof drainage products
- Trailer bodies
- Utensils
- Conveyor belts
- Architectural and automotive rim
- Variety of industrial applications

Stainless Steel Stirp 302

Chemical Compositon%	
Carbon(C)	≤0.15
Manganese(Mn)	≤2.0
Sulphur(S)	≤0.03
Phosphorus(P)	≤0.035
Silicon(Si)	≤1.0
Chromium(Cr)	17.0~19.0
Nickl(Ni)	7.0~8.0

Mechanical Properties	
HRB	90 max
Tensile Strength(Mpa)	520 min
Yield Strength(Mpa)	205
EL%	40
HV	200 max

Type 302 is a variation of the 18% chromium / 8% nickel austenitic alloy, and a slightly higher carbon version of 304.

Features

- Excellent corrosion resistance in oxidizing environments such as dilute nitric acid.
- Resistant to aggressive organic acids like acetic and phosphoric.
- Can best be welded by resistance or shielded fusion methods.

Applications

- Stamping
- Spinning
- Wire forming
- Formed into all types of washers, springs, screens, and cables
- Food and beverage industry
- Pressure containing applications

Steel Strip & Coil

Stainless Steel Stirp 304&304L

Chemical Compositon%		
Type	304	304L
Manganese(Mn)	≤2.0	≤2.0
Sulphur(S)	≤0.03	≤0.03
Phosphorus(P)	≤0.045	≤0.035
Silicon(Si)	≤1.0	≤1.0
Chromium(Cr)	18.0~20.0	18.0~20.0
Carbon(C)	≤0.08	≤0.03
Nickl(Ni)	8.0~10.5	8.0~12.0

Mechanical Properties		
Type	304	304L
TS (Mpa)	≥520	≥520
YS (Mpa)	≥205	≥205
Elongation %	≥40	≥40
Hardness (Brinell) MAX	201	201
Hardness (Rockwell B)	≤92	≤92

304 is used for a wide variety of home and commercial applications, which has a minimum of 18% chromium and 8% nickel.

Features

- Resistance to moderately aggressive organic acids
- Resistance to corrosion in oxidizing environments
- Good oxidation resistance in intermittent service to 1600°F and in continuous service to 1690°F

Applications

- Kitchen benches, sinks, troughs, equipment, and appliances
- Chemical containers, including for transport
- Food processing equipment, particularly in beer brewing, milk processing, and wine making
- Heat exchangers
- Architectural trim and molding
- Woven or welded screens for mining, quarrying & water filtration

Stainless Steel Stirp 316&316L

Chemical Compositon%		
Type	316	316L
Manganese(Mn)	≤2.0	≤2.0
Sulphur(S)	≤0.03	≤0.03
Phosphorus(P)	≤0.035	≤0.035
Silicon(Si)	≤1.0	≤1.0
Chromium(Cr)	16.0~18.0	16.0~18.0
Carbon(C)	≤0.08	≤0.03
Nickl(Ni)	10.0~14.0	12.0~15.0

Mechanical Properties		
Type	316	316L
TS (Mpa)	≥520	≥520
YS (Mpa)	≥205	≥205
Elongation %	≥40	≥40
HBS	≤187	≤187
HRB	95	95

Alloy 316/316L is molybdenum-bearing austenitic stainless steel. The higher nickel and molybdenum content in this grade allows it to demonstrate better overall corrosion resistant properties than 304.

Features

- More resistance than 304, Usually regarded as the “marine grade stainless steel”
- Grade 316L is more resistant to carbide precipitation
- Good oxidation resistance in intermittent service to 1600°F (870°C) and in continuous service to 1700°F (925°C)
- 316/316L types being extremely tough and ductile
- Excellent weldability by all standard fusion methods, both with and without filler metals.

Applications

- Food preparation equipment, especially in chloride environments
- Chemical processing, equipment
- Laboratory benches and equipment
- Pharmaceutical and textile industries

Stainless Steel Stirp Y1

Chemical Compositon%	
Carbon(C)	≤0.14
Manganese(Mn)	15.0~19.0
Sulphur(S)	≤0.03
Phosphorus(P)	≤0.035
Silicon(Si)	≤1.0
Chromium(Cr)	12.0~14.5
Nickl(Ni)	≤1.5

Mechanical Properties	
EL%	≥40
HV	≤200
Tensile Strength(Mpa)	≥520
Yield Strength(N/mm2)	≥205
HRB	≤90
Brinell Hardness(HB)	≤187

Y1 is a Hard state, austenitic stainless steel that is hardenable by heat treatment. Y1 has ultra-high tensile properties.The company independently researches and develops products.

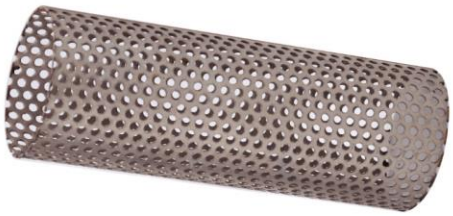
Features

- Good resistance in mildly corrosive conditions
- 301 has similar weldability to the most common stainless alloys
- Heat resistance up to 1600°F(871°C)
- Hardens at high rate, creating a very high strength from cold rolling and from roll forming.

Applications

- Arcraft structural parts
- Roof drainage products
- Trailer bodies
- Utensils
- Conveyor belts
- Architectural and automotive rim
- Variety of industrial applications

Tube



Tube

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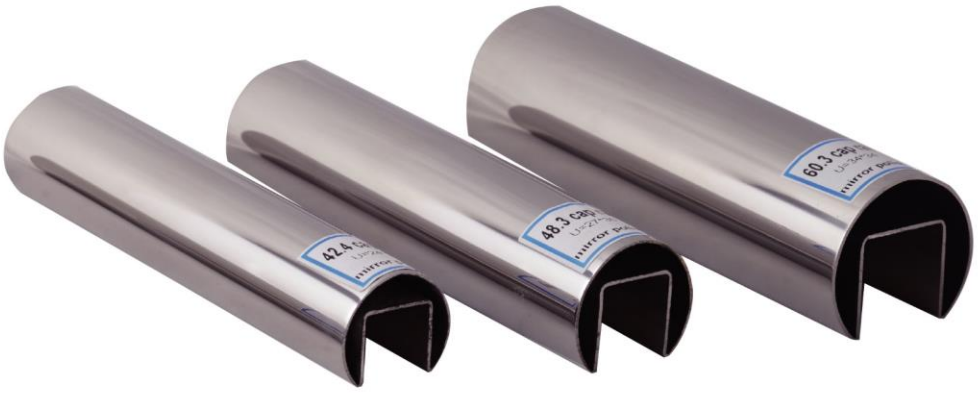

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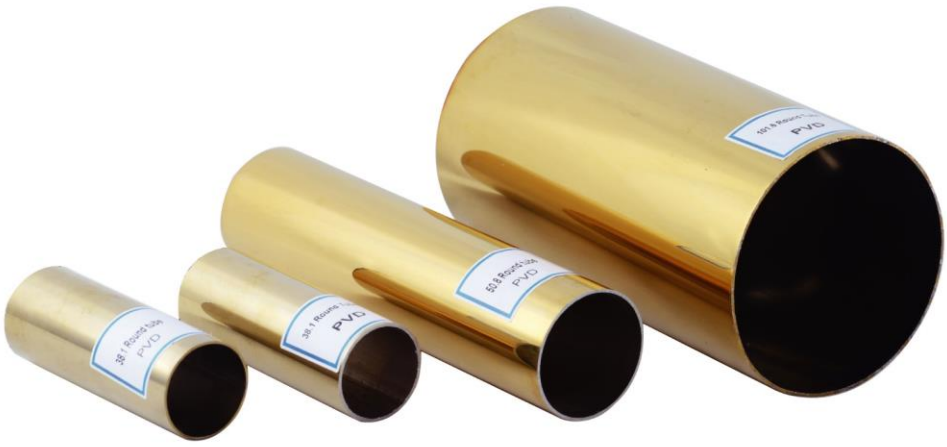
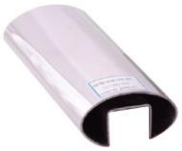


Tube

Welded Steel Tube

◆ Special Section Tube

	Description	
	Outside diameter	Groove
	25. 4	14 x 14
	38. 1	15 x 15
	42. 4	24 x 24
	50. 8	27 x 30
	50. 8	15 x 15
	50. 8	20 x 20
	60	25 x 25
	60	20 x 20
	60	24 x 24
	60	34 x 34
	63. 5	20 x 20
	101. 6	26. 7 x 23 x 26. 7
	60 x 30	24 x 24
	80 x 40	24 x 24
	80 x 40	33 x 26
	40 x 110	33 x 26
	25 x 21	14 x 14
	40 x 30	24 x 24
	60 x 40	24 x 24
	40 x 40	24 x 24
	50. 8	15 x 15

Steel Tube Size

◆ Construction, Decoration, Automotive Tubes

Size/width	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.5	2.0	2.5	3.0	4.0	5.0	6.0~22.0
Φ6~8~9.5~12.7~16~19~22	√	√	√	√	√	√	√	√	√	√	√	√			
Φ25~32~38~40~42~48~51~57~63			√	√	√	√	√	√	√	√	√	√	√	√	
Φ76~89~102~108~114~127						√	√	√	√	√	√	√	√	√	
Φ113~141~159~168~219								√	√	√	√	√	√	√	√
▪6~8~10~12~15~19~22~25~30	√	√	√	√	√	√	√	√	√	√	√				
▪38~40~50~60~80~100			√	√	√	√	√	√	√	√	√	√	√	√	√
▬10x20~25x13~30x15	√	√	√	√	√	√	√	√	√	√	√				
▬32x16~38x25~40x20			√	√	√	√	√	√	√	√	√				
▬46x15~50x25~60x15				√	√	√	√	√	√	√	√	√			
▬60x30~60x40~80x40							√	√	√	√	√	√	√	√	
▬80x60~75x45~95x45				√	√	√	√	√	√	√	√	√	√	√	

◆ Industrial Tube

Size/width	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Φ13.35~15~17.15~20~21.34	√	√	√	√	√	√	√
Φ26.67~28~28.6~33.4~34~35							
Φ40~42~45~48.26~50.8~52~54~57~60.33						√	√
Φ70~73.6~76~80~85~89							
Φ105~108~114~133~141~159~168~219	√	√	√	√	√	√	√

◆ The Specification you required is not available on our current product catalogue ,but we can produce it as you need (or based on your requirements).

Quality Inspection

◆ Tension Test

◆ Chemical Composition Test

◆ Hardness Test

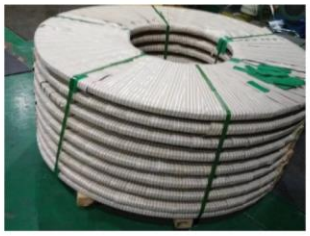
◆ Thickness Detection

◆ Metallographlc Test

Packaging Specification

◆ Coil Packaging





- ◆ Carton ring between first coil and pallet, carton ring after last coil and pallet lid.
- ◆ The surface have to be free from cracks, signs, scratches, inclusions, dents, grooves, oil/grease, chips, deposits and other impurities.
- ◆ Plastic to wrap all the coils and plastic to wrap the outer pallet lid.

◆ Tube Packaging



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