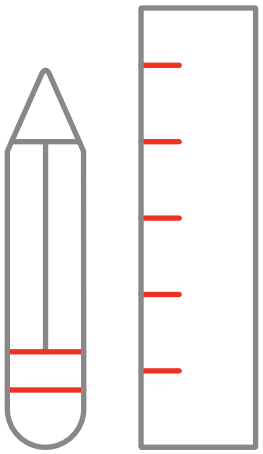
ACIER/STEEL
TAG
RIVE-NORD



Stainless Steel

Technical Data Sheet

303, 304, 310, 316, 317, 409, 410, 416, 420, 430, 301, 17-4PH, 17-7PH, etc.

Table of Contents

Stainless Steel 301 4

Stainless Steel 303 5

Stainless Steel 304 6

Stainless Steel 310 7

Stainless Steel 316 8

Stainless Steel 317 9

Stainless Steel 409 10

Stainless Steel 410 11

Stainless Steel 416 12

Stainless Steel 420 13

Stainless Steel 430 14

Stainless Steel 17–4PH 15

Stainless Steel 17–7PH 16

Conversion Table 17–19

Table of Contents (continued)

 Angles 20

 Square and Rectangular HSS Tubes 21

 Round HSS Tubes 22

 Pipes 23–30

 Round Bars 31

 Flat Bars 32–33

 Square Bars 34

 Hexagonal Bars 35

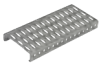
 H-Beams 36

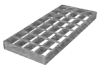
 U-Channels 37

 Plates 38

 Sheets 39

 Expanded Metals 40–41

 Security Mesh 42

 Gratings 43

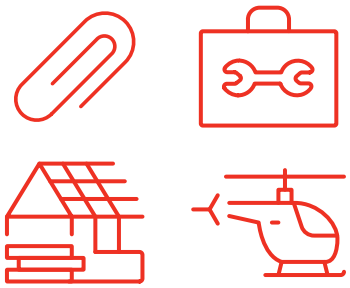
ACIER/STEEL TAG RIVE-NORD

Stainless Steel 301

Stainless Steel 301 is known for its excellent cold formability and its ability to develop high mechanical strength. It is frequently used in applications requiring elasticity, spring properties, and bending.

Recommended for

- **Stainless steel springs:** clips, fasteners, flat springs
- **Cold–formed parts:** housings, bent components, flanges
- **Light structural applications**
- **Transportation and aerospace equipment:** panels, liners



Mechanical Properties

	Annealed	*1/2 Hard*	*Full Hard*
Tensile Strength	~75,000 psi	~125,000 psi	~185,000 psi
Yield Strength	~30,000 psi	~75,000 psi	~140,000 psi
Rockwell Hardness	~B85	~C30	~C45
Elongation (2 in.)	~50%	~25%	~10%
Corrosion Resistance	Excellent	Moderate	Poor
Weldability	Very good	Good	Difficult
Heat Treatment	Not hardenable	None	None

Stainless Steel 303

Stainless Steel 303 offers excellent machinability while maintaining good corrosion resistance. With the addition of sulfur, it is ideal for high-speed machining, but less suitable for bending or welding.

Recommended for

- **Precision machining:** turned parts, shafts, bolts
- **Mechanical industry:** fasteners, connectors, fittings
- **Mass production:** non-welded machined components

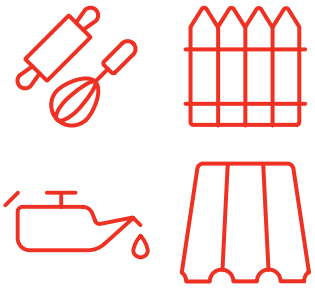
Mechanical Properties

	Typical Value
Tensile Strength	~85,000 psi
Yield Strength	~45,000 psi
Brinell Hardness	~200 HB
Elongation (2 in.)	~35%
Corrosion Resistance	Good
Weldability	Poor – not recommended
Heat Treatment	Not hardenable

Stainless Steel 304

Stainless Steel 304 is the most common grade, widely used for its very good corrosion resistance, formability, and weldability. It offers an excellent balance of performance, durability, and ease of fabrication.

Recommended for



- **Food equipment:** tanks, counters, utensils
- **Furniture and structures:** railings, stairs, frames
- **Manufacturing industry:** tanks, housings, bent sheets
- **Architectural finishes:** cladding, guardrails

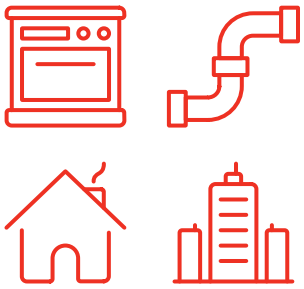
Mechanical Properties

	Typical Value
Tensile Strength	~75,000 psi
Yield Strength	~30,000 psi
Brinell Hardness	~190 HB
Elongation (2 in.)	~55%
Corrosion Resistance	Very good
Weldability	Excellent
Heat Treatment	Not hardenable

Stainless Steel 310

Stainless Steel 310 is designed to withstand high temperatures, up to approximately 1100 °C (2010 °F). With its high chromium and nickel content, it provides excellent thermal stability and oxidation resistance.

Recommended for



- **Industrial furnaces:** grids, ducts, burners
- **Combustion systems:** heat exchangers, hot pipes
- **Thermal equipment:** ovens, chimneys, expansion joints
- **Petrochemical industry:** refineries, reactors

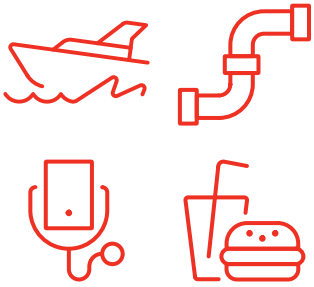
Mechanical Properties

	Typical Value
Tensile Strength	~75,000 psi
Yield Strength	~30,000 psi
Brinell Hardness	~160 HB
Elongation (2 in.)	~40%
Corrosion Resistance	Very good at high temperature
Weldability	Good
Heat Treatment	Not hardenable

Stainless Steel 316

Stainless Steel 316 is an enhanced version of 304, with the addition of molybdenum providing excellent corrosion resistance, particularly in chloride, marine, or chemical environments.

Recommended for



- **Marine applications:** railings, fasteners, hulls, anchors
- **Chemical and pharmaceutical industry:** tanks, piping, reactors
- **Medical equipment:** instruments, structures, non-critical implants
- **Food industry:** humid, saline, or acidic environments

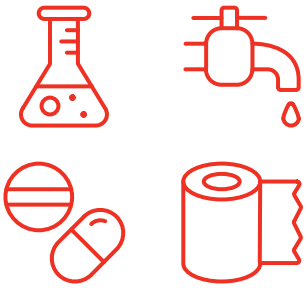
Mechanical Properties

	Typical Value
Tensile Strength	~75,000 psi
Yield Strength	~30,000 psi
Brinell Hardness	~150 to 160 HB
Elongation (2 in.)	~50%
Corrosion Resistance	Excellent
Weldability	Excellent
Heat Treatment	Not hardenable

Stainless Steel 317

Stainless Steel 317 is an upgraded version of 316, with a higher molybdenum content (up to 3.5%), which improves its resistance to pitting and crevice corrosion in acidic or chloride-containing environments.

Recommended for



- **Heavy chemical industry:** acids, chlorides, reducing environments
- **Wastewater treatment:** tanks, piping, fittings
- **Pharmaceutical and biomedical:** aseptic, aggressive environments
- **Pulp and paper:** bleaching systems, acid baths

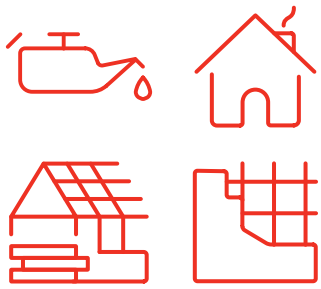
Mechanical Properties

	Typical Value
Tensile Strength	~75,000 psi
Yield Strength	~30,000 psi
Brinell Hardness	~160 HB
Elongation (2 in.)	~50%
Corrosion Resistance	Excellent
Weldability	Very good
Heat Treatment	Not hardenable

Stainless Steel 409

Stainless steel 409 is a chromium (nickel-free) stainless steel designed for high-temperature applications. It is widely used in the automotive industry, combining heat resistance with good formability.

Recommended for



- **Automotive exhaust systems:** mufflers, pipes, manifolds
- **Industrial chimneys and heat ducts**
- **Moderately corrosive environments:** ducts, claddings, structures
- **Interior applications:** partitions, metal frameworks

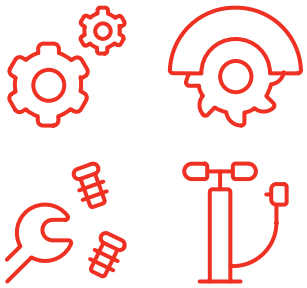
Mechanical Properties

	Typical Value
Tensile Strength	~55,000 psi
Yield Strength	~25,000 psi
Brinell Hardness	~170 HB
Elongation (2 in.)	~30%
Corrosion Resistance	Fair
Weldability	Good
Heat Treatment	Not hardenable

Stainless Steel 410

Stainless steel 410 is known for its high hardness after heat treatment. It offers good mechanical strength and wear resistance. It's an excellent choice for parts that require hardness, toughness, and machinability.

Recommended for



- **Mechanical components:** shafts, bushings, axles, rings
- **Industrial blades:** knives, cutting tools, scrapers
- **Heavy–duty fasteners:** bolts, screws, fittings subjected to friction
- **Pumping equipment:** seats, rings, pistons

Mechanical Properties

	Typical Value
Tensile Strength	~95,000 to 110,000 psi
Yield Strength	~55,000 psi
Rockwell Hardness	~C35 to C45 (heat treated)
Elongation (2 in.)	~20% (untreated) to ~10% (heat treated)
Corrosion Resistance	Moderate
Weldability	Medium
Heat Treatment	Yes, hardenable

Stainless Steel 416

Stainless steel 416 is modified with sulfur, making it one of the easiest stainless steels to machine. It can be heat treated to increase hardness and is mainly used for mass-produced machined parts.

Recommended for

- **Precision turned parts:** shafts, rings, bolts, connectors
- **High–speed machining:** threads, gears, motorized shafts
- **Non–critical mechanical components**

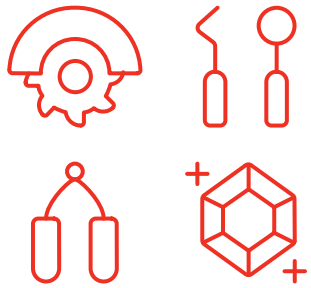
Mechanical Properties

	Typical Value
Tensile Strength	~85,000 to 100,000 psi
Yield Strength	~45,000 psi
Rockwell Hardness	~C28 to C40 (heat treated)
Elongation (2 in.)	~18% (untreated) to ~10% (heat treated)
Corrosion Resistance	Medium
Weldability	Low
Heat Treatment	Yes, hardenable

Stainless Steel 420

Stainless steel 420 is high in carbon and designed to be hardened by heat treatment. It is especially valued for cutting applications, while providing a bright, polishable finish.

Recommended for



- • **Industrial blades and knives:** shears, scalpels, cutting blades
- • **Medical and dental tools:** forceps, curettes, instruments
- • **Springs, pins, and forming** tools
- • **Applications** requiring hardness and shine

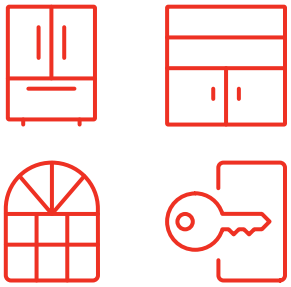
Mechanical Properties

	Typical Value
Tensile Strength	~9,000 to 110,000 psi
Yield Strength	~50,000 psi
Rockwell Hardness	~C45 to C56 (heat treated)
Elongation (2 in.)	~10% (annealed), ~5% (hardened)
Corrosion Resistance	Moderate
Weldability	Low
Heat Treatment	Yes, hardenable

Stainless Steel 430

Stainless steel 430 is non-hardenable, valued for good corrosion resistance in dry environments and dimensional stability. It is magnetic, making it suitable for appliances, decorative items, and architectural uses.

Recommended for



- • **Appliances:** stove panels, refrigerators, range hoods
- • **Stainless furniture:** cabinets, backsplashes, decorative surfaces
- • **Interior architectural components:** moldings, frames
- • **Magnetic applications:** hinges, locks, supports

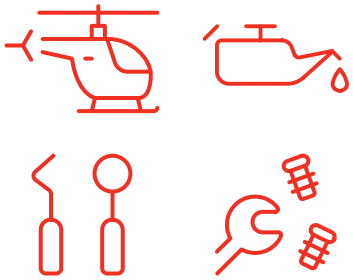
Mechanical Properties

	Typical Value
Tensile Strength	,~65,000 psi
Yield Strength	~30,000 psi
Brinell Hardness	~150 HB
Elongation (2 in.)	~25%
Corrosion Resistance	Good in dry indoor environments
Weldability	Good (risk of embrittlement varies with thickness)
Heat Treatment	Not hardenable

Stainless Steel 17–4PH

Stainless steel 17–4PH (also called Type 630) is precipitation-hardenable. It combines mechanical strength, hardness, and dimensional stability, making it suitable for high-performance applications.

Recommended for



- • **Aerospace:** fasteners, landing gear, structural parts
- • **Oil and energy industry:** valves, pumps, shafts
- • **Medical and dental:** tools, guides, high-stress components
- • **Precision mechanics:** gears, rings, high-grade bushings

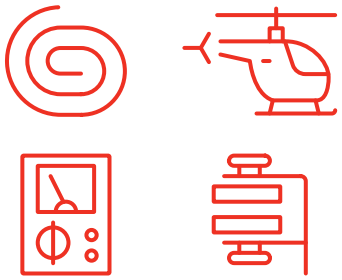
Mechanical Properties

	H900	*H1025*	*H1150*
Tensile Strength	~200,000 psi	~155,000 psi	~130,000 psi
Yield Strength	~185,000 psi	~145,000 psi	~115,000 psi
Rockwell Hardness	~C44	~C38	~C33
Elongation (2 in.)	~10 %	~13 %	~16 %
Corrosion Resistance	Good	Good	Better
Weldability	Good	Good	Very good
Heat Treatment	Yes	Yes	Yes

Stainless Steel 17–7PH

Stainless steel 17–7PH is also precipitation-hardenable, similar to 17–4PH but with better elasticity and excellent long-term mechanical performance. It is ideal for springs and flexible parts.

Recommended for



- **Precision springs:** flat springs, coils, diaphragms
- **Aerospace and space:** fasteners, tension components, linkages
- **Instrumentation:** membranes, sensors, high-frequency springs
- **Flexible components:** mechanical arms, vibrating elements

Mechanical Properties

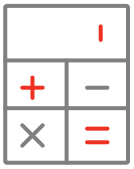
	TH1050	*CH900*
Tensile Strength	~200,000 psi	~205,000 psi
Yield Strength	~185,000 psi	~200,000 psi
Rockwell Hardness	~C45	~C47
Elongation (2 in.)	~5–7%	~4–6%
Corrosion Resistance	Average to good	Average to good
Weldability	Average to good	Average
Heat Treatment	Yes	Yes

Conversion Table

Fractions	Decimals	Millimetres
1/64	0.156	0.3969
1/32	0.313	0.7938
	0.394	1
3/63	0.469	1.1906
1/16	0.625	1.5875
5/64	0.781	1.9844
	0.787	2
3/32	0.938	2.3812
7/64	0.1094	2.7781
	0.1181	3
1/8	0.125	3.175
9/64	0.1406	3.5719
5/32	0.1563	3.9688
	0.1575	4
11/64	0.1719	4.3656
3/16	0.1875	4.7625
	0.1969	5
13/64	0.2031	5.1594
7/32	0.2188	0.5563
15/64	0.2344	5.9531
	0.2362	6
1/4	0.25	6.35
17/64	0.2656	6.7469
	0.2756	7
9/32	0.2813	7.1438
19/64	0.2969	7.5406
5/16	0.3125	7.9375
	0.315	8
21/64	0.3281	8.3344
11/32	0.3438	8.7313
	0.3543	9
23/64	0.3594	9.1281
3/8	0.3750	9.525
25/64	0.3906	9.9219
	0.3937	10
13/32	0.4063	10.3188

**Weights, dimensions, and technical data are provided for reference only. Acier TAG assumes no responsibility for possible errors or omissions. The availability of the products listed in this guide may vary depending on inventory. Please contact your representative to confirm availability.*

Conversion Table (continued)



Fractions	Decimals	Millimetres
27/64	0.4219	10.7156
	0.4331	11
7/16	0.4375	11.1125
29/64	0.4531	11.5094
15/32	0.4688	11.9063
	0.4724	12
31/64	0.4844	12.3031
1/2	0.5	12.7
	0.5118	13
33/64	0.5156	13.0969
17/32	0.5313	13.4938
35/64	0.5469	13.8906
	0.5512	14
9/16	0.5625	14.2875
37/64	0.5781	14.6844
	0.5906	15
19/32	0.5938	15.0813
39/64	0.6094	15.4781
5/8	0.6250	15.875
	0.6299	16
41/64	0.6406	16.2719
21/32	0.6563	16.6688
	0.6693	17
43/64	0.6719	17.0656
11/16	0.6875	17.4625
45/64	0.7031	17.8594
	0.7087	18
23/32	0.7188	18.2563
47/64	0.7344	18.6531
	0.7480	19
3/4	0.75	19.05
49/64	0.7656	19.4469
25/32	0.7813	19.8438
	0.7874	20
51/64	0.7969	20.2406
13/16	0.8125	20.6375
	0.8268	21

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Tableau de conversion (suite)

Fractions	Decimals	Millimetres
53/64	0.8281	21.0344
27/32	0.8438	21.4313
55/64	0.8594	21.8281
	0.8661	22
7/8	0.875	22.225
57/64	0.8906	22.6219
	0.9055	23
29/32	0.9032	23.0188
59/64	0.9219	23.4156
15/16	0.9375	23.8125
	0.9449	24
61/64	0.9531	24.2094
31/32	0.9688	24.6063
	0.9843	25
63/64	0.9844	25.0031
1	1	25.4

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Angles

Dimension (in)	Dimension (mm)	Wall (in)	Wall (mm)	Weight (lb/ft)
3/4 x 3/4	19.05 x 19.05	1/8	3.18	0.59
1 x 1	25.4 x 25.4	1/8	3.18	0.8
		3/16	4.76	1.16
		1/4	6.35	1.49
1 1/4 x 1 1/4	31.75 x 31.75	1/8	3.18	1.01
		3/16	4.76	1.48
1 1/2 x 1 1/2	38.1 x 38.1	1/8	3.18	1.23
		3/16	4.76	1.8
		1/4	6.35	2.34
2 x 2	50.8 x 50.8	1/8	3.18	1.65
		3/16	4.76	2.44
		1/4	6.35	3.19
		3/8	9.53	4.7
2 1/2 x 2 1/2	63.5 x 63.5	3/16	4.76	3.07
		1/4	6.35	4.1
		3/8	9.53	5.9
3 x 3	76.2 x 76.2	3/16	4.76	3.71
		1/4	6.35	4.9
		3/8	9.53	7.2
4 x 4	101.6 x 101.6	1/4	6.35	6.6
		3/8	9.53	9.8

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Square and Rectangular HSS Tubes

Dimension (in)	Dimension (mm)	Wall (in)	Wall (mm)	Weight (lb/ft)
1/2 x 1/2	12.7 x 12.7	0.065	1.59	0.39
5/8 x 5/8	15.875 x 15.875	0.065	1.59	0.49
3/4 x 3/4	19.05 x 19.05	0.065	1.59	0.605
		0.12	3.05	1.13
1 x 1	25.4 x 25.4	0.065	1.59	0.826
		0.12	3.05	1.436
1 1/4 x 1 1/4	31.75 x 31.75	0.065	1.59	1.048
		0.12	3.05	1.93
1 1/2 x 1 1/2	38.1 x 38.1	0.065	1.59	1.269
		0.12	3.05	2.062
		0.188	4.76	3.63
1 3/4 x 1 3/4	44.5 x 44.5	0.065	1.59	1.49
		0.12	3.05	2.66
		0.188	4.76	3.75
2 x 2	50.8 x 50.8	0.065	1.59	1.711
		0.12	3.05	3.068
		0.188	4.76	4.46
		0.25	6.35	6.01
3 x 3	76.4 x 76.4	0.065	1.59	2.59
		0.12	3.05	4.97
		0.188	4.76	6.9
		0.25	6.35	9.35

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Round HSS Tubes

Dimension (in)	Dimension (mm)	Wall (in)	Wall (mm)	Weight (lb/ft)
0.25	6.4	0.035	0.89	0.08
0.312	7.9	0.065	1.65	0.172
0.375	9.5	0.049	1.24	0.171
		0.065	1.65	0.215
0.5	12.7	0.035	0.89	0.174
		0.065	1.65	0.302
0.75	19.1	0.065	1.65	0.476
		0.12	3.05	0.807
1	25.4	0.065	1.65	0.649
		0.12	3.05	1.128
1.25	31.8	0.065	1.65	0.823
		0.12	3.05	1.448
1.5	38.1	0.065	1.65	0.996
		0.12	3.05	1.769
1.75	44.5	0.065	1.65	1.17
		0.12	3.05	2.089
2	50.8	0.065	1.65	1.343
		0.12	3.05	2.409
		0.188	4.78	3.638
		0.25	3.65	4.673
2.5	63.5	0.065	1.65	1.69
		0.12	3.05	3.05
		0.25	6.35	6.008
3	76.2	0.065	1.65	2.037
		0.12	3.05	3.691
		0.188	4.78	5.646
		0.25	6.35	7.343

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Pipes

Dimension (in)	Outside Diameter (in)	Schedule	Wall Thickness (in)	Weight (lb/ft)
1/8	0.405	5	0.035	0.1383
		10	0.049	0.1863
		40	0.068	0.2447
		STD	0.068	0.2447
		80	0.095	0.3145
		XH	0.095	0.3145
1/4	0.54	5	0.049	0.257
		10	0.065	0.3297
		40	0.088	0.4248
		STD	0.088	0.4248
		80	0.119	0.5351
		XH	0.119	0.5351
3/8	0.675	5	0.049	0.3276
		10	0.065	0.4325
		40	0.091	0.576
		STD	0.091	0.576
		80	0.126	0.7388
		XH	0.126	0.7388
1/2	0.84	5	0.065	0.5383
		10	0.083	0.671
		40	0.109	0.851
		STD	0.109	0.851
		80	0.147	1.088
		XH	0.147	1.088
		160	0.187	1.304
		XXH	0.294	1.714
3/4	1.05	5	0.065	0.6838
		10	0.083	0.8572
		40	0.113	1.131
		STD	0.113	1.131
		80	0.154	1.474
		XH	0.154	1.474
		160	0.218	1.937
		XXH	0.308	2.441

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Pipes (continued)

Dimension (in)	Outside Diameter (in)	Schedule	Wall Thickness (in)	Weight (lb/ft)
1	1.315	5	0.065	0.8678
		10	0.109	1.404
		40	0.133	1.679
		STD	0.133	1.679
		80	0.179	2.172
		XH	0.179	2.172
		160	0.25	2.844
		XXH	0.358	3.659
1 1/4	1.66	5	0.065	1.107
		10	0.109	1.806
		40	0.14	2.273
		STD	0.14	2.273
		80	0.191	2.997
		XH	0.191	2.997
		160	0.25	3.765
		XXH	0.382	5.214
1 1/2	1.9	5	0.065	1.274
		10	0.109	2.085
		40	0.145	2.718
		STD	0.145	2.718
		80	0.2	3.631
		XH	0.2	3.631
		160	0.281	4.859
		XXH	0.4	6.408
2	2.375	5	0.065	1.604
		10	0.109	2.638
		40	0.154	3.653
		STD	0.154	3.653
		80	0.218	5.022
		XH	0.218	5.022
		160	0.343	7.444
		XXH	0.436	9.029
2 1/2	2.875	5	0.083	2.475
		10	0.12	3.531
		40	0.203	5.793
		STD	0.203	5.793
		80	0.276	7.661
		XH	0.276	7.661
		160	0.375	10.01
		XXH	0.552	13.7

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Pipes (continued)

Dimension (in)	Outside Diameter (in)	Schedule	Wall Thickness (in)	Weight (lb/ft)
3	3.5	5	0.083	3.029
		10	0.12	4.332
		40	0.216	7.576
		STD	0.216	7.576
		80	0.3	10.25
		XH	0.3	10.25
		160	0.437	14.32
		XXH	0.6	18.58
3 1/2	4	5	0.083	3.472
		10	0.12	4.973
		40	0.226	9.109
		STD	0.226	9.109
		80	0.318	12.51
		XH	0.318	12.51
		XXH	0.636	22.85
4	4.5	5	0.083	3.915
		10	0.12	5.613
		40	0.237	10.79
		STD	0.237	10.79
		60	0.281	12.66
		80	0.337	14.98
		XH	0.337	14.98
		120	0.437	19.01
		160	0.531	22.51
		XXH	0.674	27.54
4 1/2	5	STD	0.247	12.53
		XH	0.355	17.61
		XXH	0.71	32.53
5	5.563	5	0.109	6.349
		10	0.134	7.77
		40	0.258	14.62
		STD	0.258	14.62
		80	0.375	20.78
		XH	0.375	20.78
		120	0.5	27.04
		160	0.625	32.96
		XXH	0.75	38.55

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Pipes (continued)

Dimension (in)	Outside Diameter (in)	Schedule	Wall Thickness (in)	Weight (lb/ft)
6	6.625	5	0.109	7.585
		10	0.134	9.289
		40	0.28	18.97
		STD	0.28	18.97
		80	0.432	28.57
		XH	0.432	28.57
		120	0.562	36.39
		160	0.718	45.3
		XXH	0.864	53.16
7	7.625	STD	0.301	23.57
		XH	0.5	38.05
		XXH	0.875	63.08
8	8.625	5	0.109	9.914
		10	0.148	13.4
		20	0.25	22.36
		30	0.277	24.7
		40	0.322	28.55
		STD	0.322	28.55
		60	0.406	35.64
		80	0.5	43.39
		XH	0.5	43.39
		100	0.593	50.87
		120	0.718	60.63
		140	0.812	67.76
		160	0.906	74.69
		XXH	0.875	72.42
9	9.625	STD	0.342	33.9
		XH	0.5	48.72

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Pipes (continued)

Dimension (in)	Outside Diameter (in)	Schedule	Wall Thickness (in)	Weight (lb/ft)
10	10.75	5	0.134	15.19
		10	0.165	18.7
		20	0.25	28.04
		30	0.307	34.24
		40	0.365	40.48
		STD	0.365	40.48
		60	0.5	54.74
		80	0.593	64.33
		XH	0.5	54.74
		100	0.718	76.93
		120	0.843	89.2
		140	1	104.1
		160	1.125	115.7
11	11.75	STD	0.375	45.55
		XH	0.5	60.07
12	12.75	5	0.165	22.18
		10	0.18	24.2
		20	0.25	33.38
		30	0.33	43.77
		40	0.406	53.53
		STD	0.375	49.56
		60	0.562	73.16
		80	0.687	88.51
		XH	0.5	65.42
		100	0.843	107.2
		120	1	125.5
		140	1.125	139.7
		160	1.312	160.3
14	14	10	0.25	36.71
		20	0.312	45.68
		30	0.375	54.57
		40	0.437	63.37
		STD	0.375	54.57
		60	0.593	84.91
		80	0.75	106.1
		XH	0.5	72.09
		100	0.937	130.7
		120	1.093	150.7
		140	1.25	170.2
		160	1.406	189.1

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Pipes (continued)

Dimension (in)	Outside Diameter (in)	Schedule	Wall Thickness (in)	Weight (lb/ft)
16	16	10	0.25	42.05
		20	0.312	52.36
		30	0.375	62.58
		40	0.5	82.77
		STD	0.375	62.58
		60	0.656	107.5
		80	0.843	136.5
		XH	0.5	82.77
		100	1.031	164.8
		120	1.218	192.3
		140	1.437	223.5
		160	1.593	245.1
18	18	10	0.25	47.39
		20	0.312	59.03
		30	0.437	82.06
		40	0.562	104.8
		STD	0.375	70.59
		60	0.75	138.2
		80	0.937	170.8
		XH	0.5	93.45
		100	1.156	208
		120	1.375	244.1
		140	1.562	274.2
		160	1.781	308.5
20	20	10	0.25	52.73
		20	0.375	78.6
		30	0.5	104.1
		40	0.593	122.9
		STD	0.375	78.6
		60	0.812	166.4
		80	1.031	208.9
		XH	0.5	104.1
		100	1.28	256.1
		120	1.5	296.4
		140	1.75	341.1
		160	1.968	379

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Pipes (continued)

Dimension (in)	Outside Diameter (in)	Schedule	Wall Thickness (in)	Weight (lb/ft)
22	22	10	0.25	58.07
		20	0.375	86.61
		30	0.5	114.8
		STD	0.375	86.61
		60	0.875	197.4
		80	1.125	250.8
		XH	0.5	114.8
		100	1.375	277
		120	1.625	353.6
		140	1.875	403
		160	2.125	451.1
24	24	10	0.25	63.41
		20	0.375	94.62
		30	0.562	140.8
		40	0.687	171.2
		STD	0.375	94.62
		60	0.968	238.1
		80	1.218	296.4
		XH	0.5	125.5
		100	1.531	367.4
		120	1.812	429.4
		140	2.062	483.1
		160	2.343	541.9
26	26	10	0.312	85.6
		20	0.5	136.2
		STD	0.375	102.6
		XH	0.5	136.2
28	28	10	0.312	92.26
		20	0.5	146.8
		30	0.625	182.7
		STD	0.375	110.6
		XH	0.5	146.8
30	30	10	0.312	98.93
		20	0.5	157.5
		30	0.625	196.1
		STD	0.375	118.6
		XH	0.5	157.5

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Pipes (continued)

Dimension (in)	Outside Diameter (in)	Schedule	Wall Thickness (in)	Weight (lb/ft)
32	32	10	0.312	105.6
		20	0.5	168.2
		30	0.625	209.4
		40	0.688	230.1
		STD	0.375	126.7
		XH	0.5	168.2
34	34	10	0.344	123.7
		20	0.5	178.9
		30	0.625	222.8
		40	0.688	244.8
		STD	0.375	134.7
		XH	0.5	178.9
36	36	10	0.312	118.9
		20	0.5	189.6
		30	0.625	236.1
		40	0.75	282.3
		STD	0.375	142.7
		XH	0.5	189.6

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Round Bars

Dimension (in)	Dimension (mm)	Weight (lb/ft)
1/8	3.18	0.042
3/16	4.76	0.094
1/4	6.35	0.167
5/16	7.94	0.26
3/8	9.53	0.376
7/16	11.11	0.511
1/2	12.7	0.667
9/16	14.29	0.845
5/8	15.88	1.043
3/4	19.05	1.502
7/8	22.23	2.044
1	25.4	2.67
1 1/8	28.58	3.38
1 1/4	31.75	4.172
1 3/8	34.93	5.049
1 1/2	38.1	6.009
1 5/8	41.28	7.051
1 3/4	44.45	8.178
2	50.8	10.68
2 1/4	57.15	13.519
2 1/2	63.5	16.69
3	76.2	24.03

Flat Bars

Thickness (in)	Thickness (mm)	Width (in)	Width (mm)	Weight (lb/ft)
1/8	3.18	1/2	12.7	0.212
		3/4	19	0.319
		1	25.4	0.425
		1 1/4	31.8	0.531
		1 1/2	38.1	0.638
		2	50.8	0.85
		3	76.2	1.28
		4	101.6	1.7
		6	152.4	2.56
3/16	4.76	1/2	12.7	0.319
		3/4	19	0.478
		1	25.4	0.638
		1 1/4	31.8	0.797
		1 1/2	38.1	0.956
		2	50.8	1.28
		3	76.2	1.91
		4	101.6	2.55
1/4	6.35	1/2	12.7	0.425
		3/4	19	0.638
		1	25.4	0.85
		1 1/4	31.8	1.063
		1 1/2	38.1	1.28
		2	50.8	1.7
		2 1/2	63.5	2.125
		3	76.2	2.55
		4	101.6	3.4
		6	152.4	5.1
3/8	9.53	3/4	19	0.956
		1	25.4	1.28
		1 1/4	31.8	1.594
		1 1/2	38.1	1.91
		2	50.8	2.55
		2 1/2	63.5	3.188
		3	76.2	3.83

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Flat Bars (continued)

Thickness (in)	Thickness (mm)	Width (in)	Width (mm)	Weight (lb/ft)
1/2	12.7	3/4	19	1.275
		1	25.4	1.7
		1 1/4	31.8	2.125
		1 1/2	38.1	2.55
		2	50.8	3.4
		3	76.2	5.1
		4	101.6	6.8
3/4	19.05	2	50.8	5.1
1	25.4	1 1/4	31.8	4.25
		1 1/2	38.1	5.1
		2	50.8	6.8
		2 1/2	63.5	8.5
		3	76.2	15.3

Square Bars

Dimension (in)	Dimension (mm)	Weight (lb/ft)
1/8	3.18	0.05
3/16	4.76	0.12
1/4	6.35	0.21
5/16	7.94	0.33
3/8	9.53	0.48
1/2	12.7	0.85
5/8	15.9	1.24
3/4	19	1.91
7/8	22.2	2.6
1	25.4	3.4
1 1/4	31.8	5.31
1 1/2	38.1	7.65

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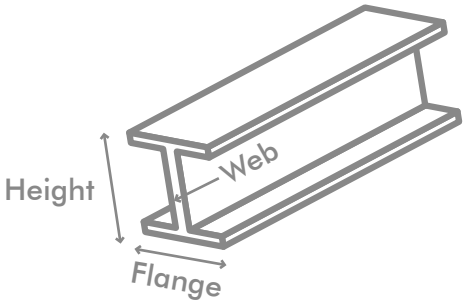
Hexagonal Bars

Dimension (in)	Dimension (mm)	Weight (lb/ft)
1/4	6.35	0.18
3/8	9.53	0.41
1/2	12.7	0.74
5/8	15.9	1.15
3/4	19	1.66
7/8	22.2	2.25
1	25.4	2.95
1 1/8	28.6	3.73
1 1/4	31.8	4.6
1 3/8	34.9	5.57
1 1/2	38.1	6.63
1 5/8	41.3	7.78
1 7/8	47.6	10.35
2	50.8	11.78

H-Beams

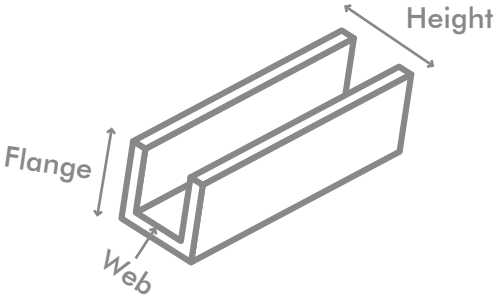
Height (in)	Flange Width (in)	Web Thickness (in)	Weight (lb/ft)
3	2 3/8	1/4	6.6
4	2 3/4	1/4	8.44
5	3	0.326	11.37
6	3.33	0.359	14.9



Height	**Total vertical distance** between the two flanges of a beam.
Flange	**Horizontal part** of the beam at the top and bottom, which distributes the loads.
Web	**Central vertical wall** connecting the two anges, supporting shear forces.

U-Channels

Dimension (in)			Dimension (mm)			Weight (lb/ft)
Height	Flange	Web	Height	Flange	Web	
4	1.721	0.321	101.6	43.71	8.153	7.57
5	1.75	0.19	127	44.45	4.826	5.35
	1.885	0.325		47.88	8.255	9.152
6	1.92	0.29	152.4	48.77	7.366	9.313
	1.034	0.314		26.26	7.976	8.102
	1.9	0.343		48.26	8.712	10.841
	2.157	0.437		54.79	11.1	14.306
8	2.25	0.22	203.2	57.15	5.588	9.201
	2.343	0.33		59.51	8.382	13.763
	2.527	0.407		64.19	10.338	17.276
10	2.4	0.24	254	60.96	6.096	11.919
	2.739	0.379		69.57	9.627	19.348
	2.886	0.526		73.3	13.36	26.852
	3.033	0.473		77.04	12.014	24.802
12	2.942	0.282	304.8	74.73	7.163	16.939
	3.047	0.387		77.39	9.83	23.245
	3.179	0.51		80.75	12.954	30.665
15	3.4	0.4	381	86.36	10.16	29.131



Height — **Total vertical distance** of the profile, measured between the outer edges of the flanges.

Flange — **Vertical side portion** of the profile, parallel to the web. It gives the channel its lateral rigidity.

Web — **Central horizontal wall** connecting the two flanges. It forms the base of the channel.

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Plates

Thickness (in)	Thickness (mm)	Weight (lb/ft²)
3/16	4.78	8.579
1/4	6.35	11.162
3/8	9.53	16.496
1/2	12.7	21.663
5/8	15.88	26.83
3/4	19.05	32.12
1	25.4	42.67
1 1/4	31.75	53
1 1/2	38.1	63.34
1 3/4	44.45	73.67
2	50.8	84.01

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Sheets

Gauges	Thickness (in)	Thickness (mm)	Weight (lb/ft²)
10	0.140	3.556	5.906
11	0.119	3.023	5.25
12	0.109	2.769	4.594
14	0.078	1.984	3.281
16	0.063	1.588	2.625
18	0.05	1.27	2.1
20	0.038	0.953	1.57
22	0.031	0.792	1.313
24	0.025	0.635	1.05

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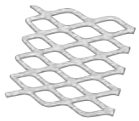
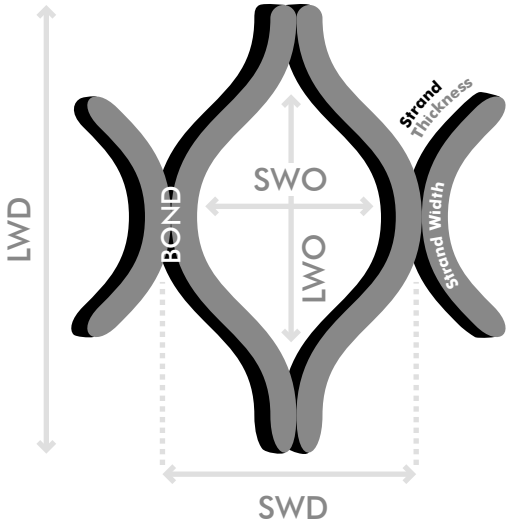
Expanded Metals



Flattened stainless steel

Patterns		Dimension		Thickness	Weight (lb/ft²)
		SWD	LWD		
3/16	22F	0.293	0.5	0.029	0.4
	20F	0.293	0.5	0.035	0.47
1/2	18F	0.57	1.2	0.04	0.64
	16F	0.57	1.2	0.05	0.8
	13F	0.57	1.2	0.07	1.43
3/4	16F	1.04	2	0.05	0.57
	13F	1.04	2	0.07	0.72
	9 (10)F	1.091	2	0.115	1.43
1 1/2	16F	1.5	3	0.05	0.4
	13F	1.5	3	0.07	0.51
	9 (10)F	1.5	3	0.115	1.11



LWD Length of the mesh in the **longest direction** (stretched mesh).

SWD Width of the mesh in the **shortest direction.**

LWO Length **between the internal tips** of the mesh (excluding strands).

SWO Width **between the internal strands** of the mesh.

BOND **Uncut metal area** linking the mesh openings together.

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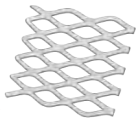
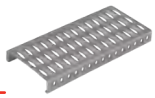
Expanded Metals (continued)



Regular stainless steel

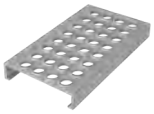
Patterns		Dimension		Thickness	Weight (lb/ft²)
		SWD	LWD		
1/2	20	0.5	1.2	0.037	0.5
	18	0.5	1.2	0.05	0.73
	16	0.5	1.2	0.062	0.91
	13	0.5	1.2	0.093	1.87
3/4	18	0.923	2	0.05	0.48
	16	0.923	2	0.062	0.6
	13	0.923	2	0.093	0.91
	9	0.923	2	0.14	2.05
1 1/2	16	1.33	3	0.062	0.45
	13	1.33	3	0.093	0.68
	9	1.33	3	0.14	1.37

Security Mesh



Diamond–pattern safety grating

Width (in)	Gauges	Height (in)	Weight (lb/ft)
4 ¾ (2 diamants)	14	2	2.5
7 (3 diamants)	14	2	3.2
9 ½ (4 diamants)	16	2	3.2
	14	2	3.7
11 ¾ (5 diamants)	16	2	3.7
	14	2	4.5

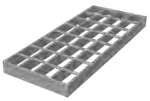


Embossed–pattern safety grating

Width (in)	Gauges	Height (in)	Weight (lb/ft)
5 (2 trous)	14	2	2.5
7 (3 trous)	14	2	2.8
10 (5 trous)	14	2	3.2
12 (6 trous)	14	2	3.8

**Weights, dimensions, and technical data are provided for reference only. Acier TAG assumes no responsibility for possible errors or omissions. The availability of the products listed in this guide may vary depending on inventory. Please contact your representative to confirm availability.*

Gratings



Welded stainless steel grating (19S)

Side Height (in)	Thickness (in)	19S4 Weight (lb/ft²)	19S2 Weight (lb/ft²)	Type
3/4	1/8	3.9	4.4	Plain
	3/16	5.6	6.2	Plain
1	1/8	5	5.5	Plain or Serrated
	3/16	7.2	7.8	Plain or Serrated
1 1/4	1/8	6.1	6.6	Plain or Serrated
	3/16	8.9	9.5	Plain or Serrated
1 1/2	1/8	7.2	7.7	Plain or Serrated
	3/16	10.5	11.2	Plain or Serrated
1 3/4	3/16	12.2	12.8	Plain or Serrated
2	3/16	13.9	14.5	Plain or Serrated
2 1/4	3/16	15.5	16.1	Plain or Serrated
2 1/2	3/16	17.2	17.8	Plain or Serrated

Pressed stainless steel grating (19SP)

Side Height (in)	Thickness (in)	19SP4 Weight (lb/ft²)	19SP2 Weight (lb/ft²)	Type
3/4	1/8	4.3	5.2	Plain
	3/16	6.4	7.8	Plain
1	1/8	5.4	6.3	Plain or Serrated
	3/16	8.1	9.5	Plain or Serrated
1 1/4	1/8	6.8	8.1	Plain or Serrated
	3/16	10.2	12.1	Plain or Serrated
1 1/2	1/8	7.9	9.2	Plain or Serrated
	3/16	11.8	13.8	Plain or Serrated
1 3/4	3/16	13.5	15.4	Plain or Serrated
2	3/16	15.2	17.1	Plain or Serrated
2 1/4	3/16	16.8	18.7	Plain or Serrated
2 1/2	3/16	18.5	20.4	Plain or Serrated

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