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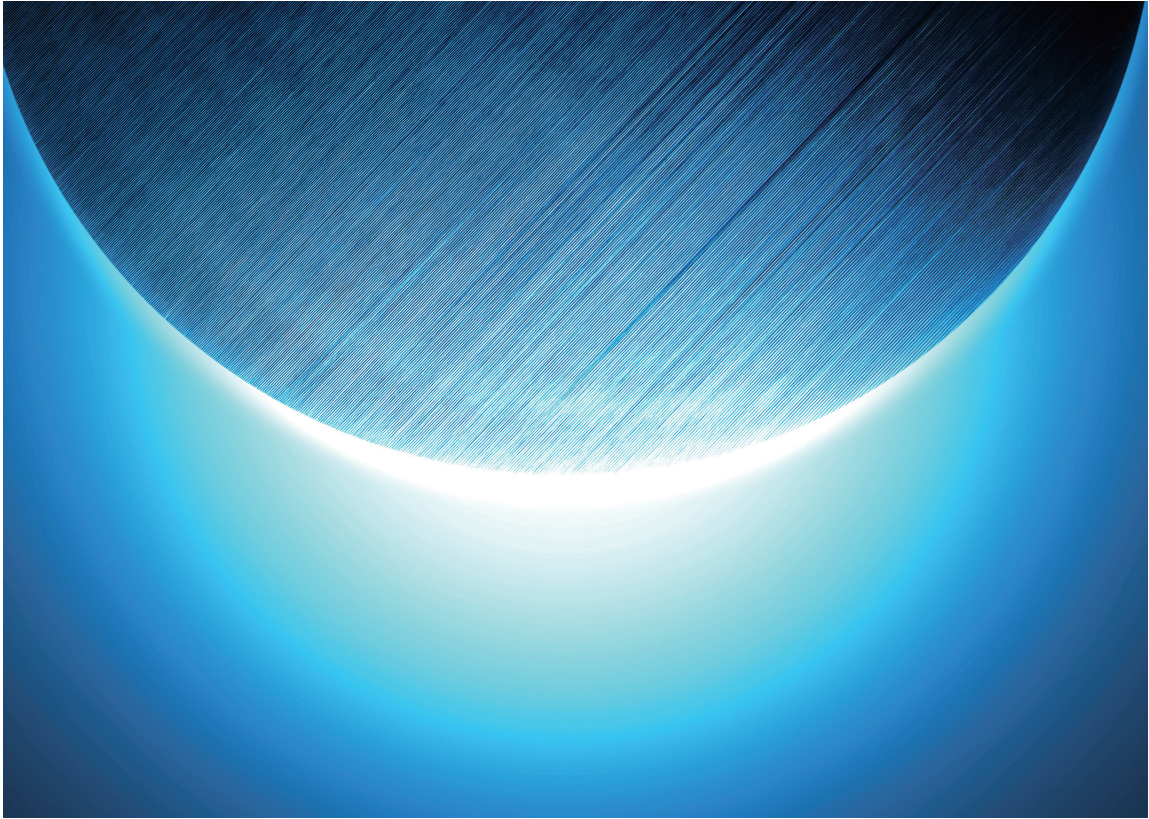


OSAKA STAINLESS

2025-2026

Osaka Stainless supports manufacturing in various industry sectors across the globe with our high-performance metals. We are conscious of honest and fair corporate practices in pursuit of the healthy growth and perseverance of our business, contribution to society, and the physical and spiritual wellbeing of our employees.

PRODUCT CATALOG ENGLISH Edition



OSAKA STAINLESS

NICKEL ALLOYS & MORE

Your Reliable Supplier for Nickel Alloy and Stainless Steel

POINT
01

Wide Selection & No Minimum Order

14 different Nickel Alloy Grades, and 30 different Stainless Steel Grades in over 2500 sizes available.

POINT
02

Fast Response, Short Lead Time

For in-stock items, inquiries before 5pm Japan time will receive same day response. In-stock items can be shipped within one business day.

POINT
03

Precision Cutting for Max. Cost Efficiency

Our exceptionally tight cutting tolerance saves Post Processing time and cost.

OSAKA STAINLESS NEWS

OSAKA STAINLESS provides the **aerospace** industry
with **high quality** materials and **confidence** ✈️

NEWS

01 Aerospace Material in Stock

Stock List	Products		Min	Max	Products		Min	Max
	17-4PH	(AMS5643)	φ10	φ200	ALLOY 625	(AMS5666)	φ6	φ330
	17-4PH H1025	(AMS5643)	φ16	φ100	A286	(AMS5732)	φ8	φ150
	ALLOY 718 ST	(AMS5662)	φ6	φ300	A286	(AMS5737)	φ10	φ90
	ALLOY 718 AG	(AMS5663)	φ8	φ300	321	(AMS5645)	φ12.7	φ203.2
	ALLOY X	(AMS5754)	φ13	φ160	Ti-Grade5	(AMS4928)	φ20	φ200

NEWS

02 AS/EN9120 certified for Aerospace

AS9120	AS9120 is a standard for the aerospace industry in which specifically designed for aerospace stockist & distributors.			
▶ Standard	AS/EN 9120:B	▶ Cert#	10000319412-MSC-ANAB	
▶ Issuing CB	DNV GL	▶ Scope	Sales, Import and Export of Steel (nickel alloy and stainless steel) for Aviation, Space and Defence Industry	
▶ Issue Date	2/24/2020	▶ Sites	Head Quarter (Other sites are under re-certification)	

01

CONTENTS

OSAKA STAINLESS PRODUCT CATALOG

High Nickel Alloy & Titanium

▶ P.03 -

▶ ALLOY C276 (Hastelloy C276)	UNS N10276	▶ ALLOY K500 (Monel K500)	UNS N05500	▶ ALLOY 718 AG (Incoloy 718)	UNS N07718
▶ ALLOY B2 (Hastelloy B2)	UNS N10665	▶ ALLOY 825 (Incoloy 825)	UNS N08825	▶ ALLOY 800H/HT (Incoloy 800H/HT)	UNS N08810 N08811
▶ ALLOY 22 (Hastelloy C22)	UNS N06022	▶ ALLOY 600 (Incoloy 600)	UNS N06600	▶ ALLOY X (Hastelloy X)	UNS N06002
▶ ALLOY 20 (Carpenter 20Cb3)	UNS N08020	▶ ALLOY 601 (Incoloy 601)	UNS N06601	▶ TB-340 Titanium Gr.2	
▶ ALLOY 200/201 (Nickel 200/201)	UNS N02200 N02201	▶ ALLOY 625 (Incoloy 625)	UNS N06625	▶ Ti-Grade5 (AMS4928)	NEW
▶ ALLOY 400 (Monel 400)	UNS N04400	▶ ALLOY 718 ST (Incoloy 718)	UNS N07718		

Stainless Steel

▶ P.11 -

▶ SUS304	▶ SUS403/410	▶ SUS630H1025	▶ S31254 (6%MO)	254SMO
▶ SUS304L	▶ SUS403QT/410QT	▶ SUS630H1075	▶ XM19 A (S20910)	Nitronic 50
▶ SUS303	▶ SUS420J2	▶ SUS630H1150	▶ SUS329J4L	
▶ SUS316	▶ SUS317L	▶ SUS420J2QT	▶ S31803/S32205 (SUS329J3L)	
▶ SUS316L	▶ SUS430	▶ 17-4PH ST	▶ S32750	
▶ SUS316Ti	▶ SUS440C	▶ 17-4PH H1025	▶ S32760	
▶ SUS310S	▶ SUS630	▶ A286 (AMS5732)		
▶ SUS321	▶ SUS630H900	▶ A286 (AMS5737)	NEW	

Machinings

- ▶ P.10 Bolt • Nut • Washer • Flange
▶ P.25 Processed Parts Samples

Reference

- ▶ P.29 Quality Control Facilities
▶ P.31 Nickel Alloy Profile

Out Sourceable List

- ▶ P.33 Available Stock from OSC's local partner

2025 UPDATE

①New Stock Ti-Grade5(AMS4928) P9	③New Inspection Facility LB4000EXII P26
②New Sizes XM19 160mm, 180mm, 200mm P16 A286 24mm, 36mm P19 SUS630H1025 160mm, 170mm, 180mm, 190mm, 200mm P20	

REGULAR LENGTH

1000mm	3500mm
2000mm	4000mm
3000mm	2500 - 3990mm

JIS TOLERANCE

Size(mm)	h7	h8	h9	h10	h11	h12	h13
- 3	+0 / -0.010	+0 / -0.014	+0 / -0.025	+0 / -0.040	+0 / -0.060	+0 / -0.10	+0 / -0.14
3 - 6	+0 / -0.012	+0 / -0.018	+0 / -0.030	+0 / -0.048	+0 / -0.075	+0 / -0.12	+0 / -0.18
6 - 10	+0 / -0.015	+0 / -0.022	+0 / -0.036	+0 / -0.058	+0 / -0.090	+0 / -0.15	+0 / -0.22
10 - 18	+0 / -0.018	+0 / -0.027	+0 / -0.043	+0 / -0.070	+0 / -0.11	+0 / -0.18	+0 / -0.27
18 - 30	+0 / -0.021	+0 / -0.033	+0 / -0.052	+0 / -0.084	+0 / -0.13	+0 / -0.21	+0 / -0.33
30 - 50	+0 / -0.025	+0 / -0.039	+0 / -0.062	+0 / -0.100	+0 / -0.16	+0 / -0.25	+0 / -0.39
50 - 80	+0 / -0.030	+0 / -0.046	+0 / -0.074	+0 / -0.12	+0 / -0.19	+0 / -0.30	+0 / -0.46
80 - 120	+0 / -0.035	+0 / -0.054	+0 / -0.087	+0 / -0.14	+0 / -0.22	+0 / -0.35	+0 / -0.54

COLD BAR Tolerance

- ▶ ROUND BAR ... h9 ▶ HEX, SQUARE, FLAT BAR ... h11~h13
▶ CG centreless ground ... h7

High Nickel Alloy & Titanium

Stainless Steel

Machinings

Reference

Out Sourceable List

02

High Nickel Alloy & Titanium	High Nickel Alloy & Titanium Stock and Specification Outline										Out Source		
	Alloy	Known As	Material Specification※	Round Bar	Hexagon Bar	Hex Bolt	Stud bolt	Nut Washer	Flange	Remark	Plate	Pipe / Tube	Welding Rod / Wire
				Detail : P.5-8	Detail : P.9	Detail : P.10	Detail : P.10	Detail : P.10	Detail : P.10				
	Min - Max(mm)				Min - Max(mm)								
	ALLOY C276	Hastelloy C276	ASTM B574 / B564 ASME SB574 / SB564 ★ NACE MR0175 (ISO15156) NACE MR0103	2 - 350	10 - 30	M6 - M16	M6 - M16	M4 - M20	10K 20A-100A	• Corrosion Test ASTM G28A	○	○	○
	ALLOY B2	Hastelloy B2	ASTM B335 / B564 ★ ASME SB335 / SB564 ★	12 - 250							○		
	ALLOY 22	Hastelloy C22	ASTM B574 / B564 ★ ASME SB574 / SB564 ★ NACE MR0175 (ISO15156) NACE MR0103	2 - 350	10 - 30	M6 - M16	M6 - M12	M5 - M20	10K 20A-100A	• Corrosion Test ASTM G28A	○	○	○
	ALLOY 20	Carpenter 20Cb3	ASTM B473 ASME SB473 NACE MR0103	10 - 250	17 - 30			M10 - M16			○	○	○
	ALLOY 200 / 201	Nickel 200/201	ASTM B160 / B564 ★ ASME SB160 / SB564 ★	2 - 250	10 - 24			M5 - M16			○	○	○
	ALLOY 400	Monel 400	ASTM B164 / B564 ★ ASME SB164 / SB564 ★ NACE MR0175 (ISO15156) NACE MR0103	6 - 250	17 - 24			M10 - M16			○	○	○
	ALLOY K500AG	Monel K500AG	ASTM B865 QQ-N-286 NACE MR0175 (ISO15156) NACE MR0103	10 - 280						• Direct Aged • Charpy Test ASTM A370	○		
	ALLOY 600	Inconel 600	ASTM B166 / B564 ★ ASME SB166 / SB564 ★ NACE MR0103	3 - 250	10 - 24			M5 - M16			○	○	○
	ALLOY 601	Inconel 601	ASTM B166 ASME SB166	3 - 250	10 - 24			M5 - M16			○	○	○
	ALLOY 625	Inconel 625	ASTM B446 / B564 ★ ASME SB446 / SB564 ★ NACE MR0175 (ISO15156) NACE MR0103 AMS 5666 GE S-400 GE S-1000	3 - 330	17 - 24			M10 - M16		• GRADE1 • Corrosion Test ASTM G28A	○	○	○
	ALLOY 718 ST	Inconel 718	ASTM B637 ASME SB637 AMS 5662 GE S-400 GE C50TF13 * GE B50T69 * GE B50TF15 A&D * GE S-1000	6 - 300						• VIM / VAR	○		○
	ALLOY 718 AG	Inconel 718	ASTM B637 ASME SB637 AMS 5663 GE S-400 GE C50TF13 * GE B50T69 * GE B50TF15 A&D * GE S-1000	8 - 300						• VIM / VAR			
ALLOY 800H / HT	Incoloy 800H/HT	ASTM B408 / B564 ★ ASME SB408 / SB564 ★	10 - 250	17 - 24			M10 - M16			○	○	○	
ALLOY X	Hastelloy X	ASTM B572 ASME SB572 AMS 5754 GE S400 GE S-1000	13 - 160							○		△	
TB340	Titanium Gr.2	JIS H4650	3 - 50	10 - 46						○	○	○	
Ti Grade5 NEW	Ti-6AL-4V	ASTM B348 / F1472 ASME SB348 AMS4928 AMS6931 GE S-400	20 - 200							○			
◆ Inconel, Incoloy, and Monel are registered trademarks of Special Metal Corporation. ◆ Carpenter is a registered trademark of Carpenter Technology Corporation. ◆ Hastelloy is a registered trademark of Haynes International, Inc.													
* - Chemistry Only													
★ - Apply to forged bars only													
OSC conducts PMI to all in-coming and out-going process for Nickel Alloy products.													

03

High Nickel Alloy & Titanium

Stainless Steel

Machinings

Reference

Out Sourceable List

04

High Nickel Alloy & Titanium

Stainless Steel

Machinings

Reference

Out Sourceable List

High Nickel Alloy & Titanium

Stainless Steel

Machinings

Reference

Out Sourceable List

High Nickel Alloy Round Bar

Grade	UNS N10276	UNS N10665	UNS N06022	UNS N08020	N02200/N02201	UNS N04400	UNS N05500
Size (mm)	ALLOY C-276	ALLOY B-2	ALLOY 22	ALLOY 20	ALLOY 200 / 201	ALLOY 400	ALLOY K500AG
	Density ▶ 8.89	9.24	8.69	8.08	8.89	8.83	8.47
2	●		●		●		
3	●		●		●		
4	●		●		●		
5	●		●		●		
5.3	●						
6	▲		▲		▲	▲	
7.13	▲						
8	▲		▲		▲	▲	
8.95	▲						
10	▲		▲	▲	▲	●	★
12	★		▲	▲	▲	●	★
13	★		★	▲ 12.7	▲	●	★
16	★	★	★	●	★	●	★
18			★		★		
19	★			●		●	
20	★	★	★	●	★	●	★
22	★	★	★	●	★	●	★
24	★						
25	★	★	★	●	★	●	★
28	★	★	★	●	★	●	★
30	★	★	★	●	★	●	★
32	★		★	●	★	●	★
35	★	★	★	●	★	●	★
36	★						
38	★		★	●	★	●	★
40	★	★	★	●	★	●	★
42	★		★	●	★	●	★
45	★	★	★	●	★	●	★
50	★	★	★	●	★	●	★
55	★	★	★	●	★	●	★
60	★	★	★	●	★	●	★
65	★	★	★	●	★	●	★

● ▲ ■ ● ★ ... check Pg.2 for meaning

φ13mm & Smaller - h9 tolerance *Exception for old stock

High Nickel Alloy & Titanium

Stainless Steel

Machinings

Reference

Out Sourceable List

Grade	UNS N06600	UNS N06601	UNS N06625	UNS N07718	UNS N07718	N08810/N08811	UNS N06002
Size (mm)	ALLOY 600	ALLOY 601	ALLOY 625	ALLOY 718 ST	ALLOY 718 AG	ALLOY 800H / HT	ALLOY X
	Density ▶ 8.42	8.11	8.44	8.19	8.19	7.95	8.3
2							
3	●	●	●				
4	●	●	●				
5	●	●	●				
5.3							
6	▲	▲	▲	▲			
7.13							
8	▲	▲	▲	★	★		
8.95							
10	▲	▲	▲	★	★	★	
12	▲	▲	▲	★	★	★	
13	▲ 12.7	▲	★	★	★	★ 12.7	★
16	●	●	★	★	★	●	★
18	●	●	★	★			★
19							
20	●	●	★	★	★	●	★
22	●	●	★	★	★	●	
24							
25	●	●	★	★	★	●	★
28	●	●	★	★	★	●	
30	●	●	★	★	★	●	★
32	●	●	★	★	★	●	
35	●	●	★	★	★	●	★
36							
38	●	●	★	★	★	●	
40	●	●	★	★	★	●	★
42	●	●	★	★	★	●	
45	●	●	★	★	★	●	★
50	●	●	★	★	★	●	★
55	●	●	★	★	★	●	
60	●	●	★	★	★	●	★
65	●	●	★	★	★	●	

φ13mm & Smaller - h9 tolerance *Exception for old stock

High Nickel Alloy & Titanium

Stainless Steel

Machinings

Reference

Out Sourceable List

High Nickel Alloy Round Bar							
Grade	UNS N10276	UNS N10665	UNS N06022	UNS N08020	N02200/N02201	UNS N04400	UNS N05500
Size (mm)	 ALLOY C-276	 ALLOY B-2	 ALLOY 22	 ALLOY 20	 ALLOY 200 / 201	 ALLOY 400	 ALLOY K500AG
	Density ▶ 8.89	9.24	8.69	8.08	8.89	8.83	8.47
70	★	★	★	●	★	●	★
75	★		★	●	★	●	★
80	★	★	★	●	★	●	★
85	★		★	●	★	●	★
90	★	★	★	●	★	●	★
95	★		★	●	★	●	
100	★	★	★	★	★	★	★
105	★		★				
110	★	★	★	★	★	★	★
115	★		★				
120	★	★	★	★	★	★	★
125	★		★				
130	★	★ 133	★	★	★	★	★
135	★		★				
140	★		★	★	★	★	★
145	★		★				
150	★	★	★	★	★	★	★
155	★		★				
160	★	★	★	★	★	★	★
165	★		★				
170	★		★	★			
180	★	★	★	★	★	★	★
190	★		★	★			
200	★	★	★	★	★	★	★
210	★		★		★	★	★
220	★		★				
230	★	★	★	★	★	★	★
250	★	★	★	★	★	★	★
280	★		★				★
300	★		★				
330	★		★				
350	★		★				

● ▲ ■ ● ★ ... check Pg.2 for meaning

High Nickel Alloy & Titanium

Stainless Steel

Machinings

Reference

Out Sourceable List

Grade	UNS N06600	UNS N06601	UNS N06625	UNS N07718	UNS N07718	N08810/N08811	UNS N06002
Size (mm)	 ALLOY 600	 ALLOY 601	 ALLOY 625	 ALLOY 718 ST	 ALLOY 718 AG	 ALLOY 800H / HT	 ALLOY X
	Density ▶ 8.42	8.11	8.44	8.19	8.19	7.95	8.3
70	●	●	★	★	★	●	★
75	●	●	★	★	★	●	
80	●	●	★	★	★	●	★
85	●	●	★	★	★	●	
90	●	●	★	★	★	●	★
95	●	●	★	★	★	●	
100	★	★	★	★	★ 101.6	★	★
105				★			
110	★	★	★	★	★	★	
115							
120	★	★	★	★	★	★	
125							
130	★	★	★	★	★	★	★
135							
140	★	★	★	★	★	★	
145							
150	★	★	★	★	★	★	
160	★	★	★	★	★	★	★
165							
170		★		★	★		
180	★	★	★	★	★	★	
190			★	★			
200	★	★	★	★	★	★	
210				★	★		
220							
230	★	★	★	★	★	★	
250	★	★	★	★	★	★	
280			★	★	★		
300			★	★	★		
330			★				

High Nickel Alloy & Titanium

Stainless Steel

Machinings

Reference

Out Sourceable List

High Nickel Alloy Hexagon Bar									
Grade	UNS N10276	UNS N06022	UNS N08020	UNS N02201	UNS N04400	UNS N06600	UNS N06601	UNS N06625	UNS N08811
Size (mm)	ALLOY C-276	ALLOY 22	ALLOY 20	ALLOY 201	ALLOY 400	ALLOY 600	ALLOY 601	ALLOY 625	ALLOY 800HT
	Density ▶8.89	8.69	8.08	8.89	8.83	8.42	8.11	8.44	7.95
10	★	★		★		★	★		
13	★	★		★		★	★		
17	★	★	★	★	★	★	★	★	★
19	★	★	★	★	★	★	★	★	★
22									
24	★	★	★	★	★	★	★	★	★
27									
30	★	★	★						
32									
36									

◆▲■●★ ... check Pg.2 for meaning ※Drawn, (Solution) Annealed, Pickled (Except 201 is Cold Finished)

Titanium Gr.2			
	Round Bar	Hex Bar	
Density	4.51	4.51	
size (mm)	3	16	★ 10
	4	18	★ 13
	5	18.3	★ 17
	5.3	20	★ 19
	6	22	★ 21
	7	24	★ 22
	7.13	25	★ 24
	8	28	★ 27
	8.95	30	★ 30
	9	35	★ 32
	10	40	★ 36
	10.8	45	★ 41
	12	50	★ 46
	13		
	14		
	14.6		
	15		

Ti-Grade5(AMS4928)		
	Round Bar	
Density	4.43	
size (mm)	20	180
	25	200
	30	
	35	
	40	
	45	
	50	
	55	
	60	
	65	
	70	
	80	
	90	
	100	
	120	
	140	
	160	

Alloy C276 Alloy 22 SUS329J4L Hex Bolt																				
ALLOY C-276																				
Size	length (mm)	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
M6	Half Thread				●	●	●													
	Full Thread	●	●	●		●	●	●	●	●										
M8	Half Thread	●	●		●	●	●	●	●	●										
	Full Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
M10	Half Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Full Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
M12	Half Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Full Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
M16	Half Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Full Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ALLOY 22																				
Size	length (mm)	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
M6	Half Thread	●	●	●	●	●														
	Full Thread	●	●	●	●	●	●	●	●	●										
M8	Half Thread	●	●	●	●	●	●	●	●	●										
	Full Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
M10	Half Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Full Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
M12	Half Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Full Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
M16	Half Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Full Thread	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SUS329J4L																				
Size	length (mm)	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
M16	Half Thread									●		●								
	Full Thread							●												
M20	Half Thread							●		●		●								
	Full Thread																			
M24	Half Thread									●		●		●						
	Full Thread																			

Specification : JIS B1180, Semi-Finished Type

M6&M8 are machined M10, M12, M16 are Hot Forged + Solution Treated

●Stock ○Short time production

Alloy C276 / Alloy 22 Studbolt

length : 1000mm

size ▶	M6	M8	M10	M12	M16
	●	●	●	●	●

Alloy C276-C22 Flange

	20A	25A	40A	50A	65A	80A	100A
C-276 JIS10K	●	●	●	●	●	●	●
C-22 JIS10K	●	●	●	●	●	●	●

Type : BL-FF / SOP-FF

Please enquire for the sizes not listed

Nickel Alloy & Duplex Stainless Nut & Washer

Grade	UNS N10276	UNS N06022	UNS N08020	UNS N02201	UNS N04400	UNS N06600	UNS N06601	UNS N06625	UNS N08811		
Size (mm)	ALLOY C-276	ALLOY 22	ALLOY 20	ALLOY 201	ALLOY 400	ALLOY 600	ALLOY 601	ALLOY 625	ALLOY 800HT	SUS329 J4L	S31803
	Nut Washer	Spring Washer	Nut Washer	Nut Washer	Nut Washer	Nut Washer	Nut Washer	Nut Washer	Nut Washer	Nut Washer	Nut Washer
M4	●										
M5	●	●	●		●			●			
M6	●	●	●		●			●		●	
M8	●	●	●		●			●		●	●
M10	●	●	●	●	●	●	●	●	●	●	●
M12	●	●	●	●	●	●	●	●	●	●	●
M16	●	●	●	●	●	●	●	●	●	●	●
M20	●		●							●	●
M24											●

Specification : Nut, JIS B1181 Class 1 Washer, JIS B1256 Normal Series Grade.A

※Exception : M12 Washer, thickness 2mm

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Stainless Steel Stock and Specification Outline																			
Grade	Equivalent Grade	Specification							Cold Round Bar Detail : P.13	Smooth Turned Round Bar			Knurled Round Bar Detail : P.19	Square Bar	Hexagon Bar Detail : P.20	Plate	Pipe / Tube	Welding Rod / Wire	
		JIS G4318	JIS G4303	ASTM / ASME			AMS	NACE MR0175 MR0103		EN	Austenitic Detail : P.15	Ferritic Martensitic/Duplex Detail : P.17							Participation Hardening Detail : P.19
				A/SA182	A/SA276	A/SA479													
				Min - Max (mm)															
SUS304	S30400	○	○	○	○	○		○	2 - 50	16 - 250			6 - 30	10 - 25	8 - 80	○	○	○	
SUS304L	S30403	○	○	○	○	○		○	1.4301	6 - 13	16 - 250					10 - 70	○	○	○
SUS316	S31600	○	○	○	○	○		○	1.4306	2 - 30	16 - 250					8 - 80	○	○	○
SUS316L	S31603	○	○	○	○	○		○	1.4401	2 - 30	20 - 250					8 - 70	○	○	○
SUS316Ti	S31635			○	○	○		○	1.4404		16 - 200						○	○	○
SUS303	S30300	○	○	○ ASTM A582					1.4571	3 - 30	20 - 100			6 - 30		5.5 - 46	○		○
SUS317L	S31703	○	○						1.4305	8 - 13	16 - 60					17 - 30	○	○	○
SUS310S	S31008	○	○							3 - 18.3	16 - 150					10 - 46	○	○	○
SUS321	S32100	○	○	○	○	○	5645 QQ-S-763	○		6 - 9.52	16 - 203.2					17 - 46	○	△	○
SUS403 (A)	S40300	○							1.4878	4 - 24						10 - 65	○		
SUS403 (H)	S40300		○								16 - 150								
SUS420J2 (A)	S42000	○								3 - 24						8 - 46	○		
SUS420J2 (H)	S42000		○								16 - 250								
SUS430	S43000	○	○							3 - 20	16 - 200						○		
SUS440C	S44004	○								3.2 - 14.2							○		
SUS630	S17400		○							3 - 13				14 - 200		10 - 46	○		
SUS630 H900	S17400		○											10 - 250					
SUS630 H1025	S17400		○											10 - 200					
SUS630 H1075	S17400		○											10 - 150					
SUS630 H1150	S17400		○											10 - 250					
17-4PH ST	S17400			○	ASTM A564 ASME SA564		5643							10 - 200			○	○	
17-4PH H1025	S17400			○	ASTM A564 ASME SA564		5643							16 - 100					
A286(AMS5732)	S66286			○	A453 B&D/A638-2 SA453 B&D/SA638-2		5732	○						8 - 150			○		
A286(AMS5737) NEW	S66286			○	A453 A&D/A638-1 SA453 A&D/SA638-1		5737							10 - 90					
SUS329J4L	S31260		○							6 - 12	16 - 300			Duplex Bolt・Nut・Washer Stock Available. Details in P.10		13 - 36	○	○	○
S31803/32205(F51/F60)	SUS329J3L			○	○	○		○	1.4462		10 - 350					17 - 55	○	○	○
S32750	SAF2507			○	○	○		○	1.4410		10 - 300						○	○	○
S32760	ZERON100			○	○	○		○	1.4501		12.7 - 250						○	○	○
S31254	254 SMO			○	○	○		○	1.4547		10 - 150						○	○	
XM19(S20910)	Nitronic50			○	○	○	5764	○			12.7 - 200								

★SAF2507 is a registered trademark of Sandvik AB ★ZERON100 is a registered trademark of Rolled Alloys, Inc

★254SMO is a registered trademark of Outokumpu OY ★Nitronic50 is a registered trademark of AK Steel Co.

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○ ... Sourceable in Japan

△ ... Sourceable from Overseas

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Stainless Steel Cold Round Bar Tolerance : h9

Grade	SUS 304	SUS 304L	SUS 303	SUS 316	SUS 316L	SUS 310S	SUS 317L	SUS 321	SUS 403	SUS 420J2	SUS 430	SUS 440C	SUS 630
size (mm)	7.93	7.93	7.98	7.98	7.98	7.98	7.98	7.8	7.75	7.75	7.75	7.78	7.78
2	○			●	●								
2.5	○												
3	○		▲	●	●	●				●	●	● 3.2	●
3.5	○			●	●								
4	○		▲	●	●	●			●	●	●	● 4.2	●
4.4	○			●	●	●							
5	○		▲	●	●	●			●	●	●	● 5.2	●
5.3	○			●	●	●							
5.5	○			●	●								
6	○	●	▲	●	●	●		●	●	●	●	● 6.2	●
6.35	○												
7	○	●	▲	●	●	●			●	●	●	● 7.2	●
7.1	○			●	●	●							
8	○	●	▲	●	●	●	●	●	●	●	●	● 8.2	●
8.4	○			●	●								
8.95	○			●	●	●			●				
9	○		▲	●	●					●	●	● 9.2	●
9.52	○												
10	○	●	▲	●	●	●	●		●	●	●	● 10.2	●
10.8	○			●	●	●			●				
11	○		▲						●		●		
11.3	○			●	●								
12	○	●	▲	●	●	●	●		●	●	●	● 12.2	●
12.7	○			●	●	●							
13	○	●	▲	●	●	●	●		●	●	●	● 13.2	●
14	○		▲	●	●	●			●	●	●	● 14.2	
14.3	○			●	●								
14.6	○			●	●	●			●				
15	○		▲	●	●				●		●		
15.87	○												
16	○		▲	●	●				●	●	●		
16.3	○			●	●								
17	○		▲						●		●		

● ▲ ■ ★ ... check Pg.2 for meaning

Grade	SUS 304	SUS 303	SUS 316	SUS 316L	SUS 310S	SUS 321	SUS 403	SUS 420J2	SUS 430	SUS 440C
size (mm)	7.93	7.93	7.98	7.98	7.98	7.8	7.75	7.75	7.75	7.78
17.3	○		●	●						
18	○	▲	●	●			●		●	
18.3	○		●	●						
19	○	▲	●	●			●	●	●	
20	○	▲	●	●			●	●	●	
20.3	○		●	●						
21	○	▲								
22	○	▲	●	●			●	●		
23	○	▲								
23.3										
24	○	▲	●	●			●	●		
25	○	▲	●	●						
26	○	▲								
27	○									
27.62	○									
28	○	▲	●	●						
30	○	▲	●	●						
32	○									
33	○									
33.3	○									
34	○									
35	○									
36	○									
38	○									
40	○									
42	○									
45	○									
50	○									

● ▲ ■ ★ ... check Pg.2 for meaning

Austenitic Stainless Steel Smooth Turned Round Bar

Grade	SUS 304	SUS 304L	SUS 303	SUS 316	SUS 316L	SUS 316Ti	SUS 310S	SUS 317L	SUS 321	321 (AMS 5645)	XM19	S31254
size (mm)	Density▶7.93	7.93	7.93	7.98	7.98	7.98	7.98	7.98	7.8	7.8	7.88	8.0
10									★ 9.52			★ SD
12												★ SD
13									★ 12.7		★	
16	○	●		●		★ h9	●	●	★ 15.87		★	★
18	○	●					●					
19	○	●		●			●	●	★ 19.05			
20	○	●	●	●	●	★	●	●	★ 20.64		★	★
22	○	●	●	●	●	★	●	●	★ 22.22		★	★
24	○	●	●	●	●		●	●	★			
25	○	●	●	●	●	★	●	●	★ 25.4		★	★
26	○	●										
27	○	●		●	●							
28	○	●	●	●	●	★	●	●	★ NEW 28.57		★	★
30	○	●	●	●	●	★	●	●	★		★	★
32	○	●	●	●	●		●	●	★ 31.75		★	★
33	○	●		●	●							
34	○	●							★ NEW 34.92			
35	○	●	●	●	●	★	●				★	★
36	○	●	●	●	●		●	●	★			
38	○	●	●	●	●		●	●	★		★	★
40	○	●	●	●	●	★	●	●	★		★	★
42	○	●	●	●	●		●	●	★ 41.27		★	★
44	○	●										
45	○	●	●	●	●	★	●	●	★ NEW 44.45		★	★
46	○	●		●	●							

● ◐ ▲ ■ ● ★ ... check Pg.2 for meaning SD.....PICKLED

Grade	SUS 304	SUS 304L	SUS 303	SUS 316	SUS 316L	SUS 316Ti	SUS 310S	SUS 317L	SUS 321	321 (AMS 5645)	XM19	S31254
size (mm)	Density▶7.93	7.93	7.93	7.98	7.98	7.98	7.98	7.98	7.8	7.8	7.88	8.0
48	○	●	●	●	●		●					
50	○	●	●	●	●	★	●	●	★ 50.8		★	★
55	○	●	●	●	●	★	●	●	★ NEW 57.15		★	
60	○	●	●	●	●	★	●	●			★	★
65	○	●	●	●	●		●		★ 63.5		★	
70	○	●	●	●	●	★	●		★ NEW 69.85		★	★
75	△	△	△	△	△		●		★ 76.2		★	
80	△	△	△	△	△	★	●		★ 82.55		★	★
85	△	△	△	△	△		●		★			
90	△	△	△	△	△	★	●		★ NEW 88.9		★	★
95	△	△	△	△	△		●					
100	△	△	△	△	△	★	★		★ NEW 101.6		★	★
110	☆	☆		★	★		★				★	★
120	☆	☆		★	★	★	★				★	★
130	☆	☆		★	★		★		★ NEW 127		★	
140	☆	☆		★	★		★				★	
150	☆	☆		★	★	★	★		★ NEW 152.4		★	★
160	☆	☆		★	★				★ NEW 165.1		★	
170	☆	☆		★	★				★ NEW 177.8			
180	☆	☆		★	★	★					★	
190	☆	☆		★	★				★ NEW 190.5			
200	☆	☆		★	★	★			★ NEW 203.2		★	
230	☆	☆		★	★							
250	☆	☆		★	★							

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Ferritic·Martensitic·Duplex Stainless Steel Smooth Turned Round Bar

Grade	 SUS 403 (H)	 SUS 420J2 (H)	 SUS 430	 S31803 S32205	 SUS 329J4L	 S32750	 S32760
size (mm)	Density ▶ 7.75	7.75	7.75	7.8	7.78	7.8	7.8
6					h9		
8					h9		
10				h9	h9		
12				h9	h9		
13				h9			
16	●	●	●	★	●	★	★ 15.88
18	●	●	●		▲		
19							★
20	●	●	●	★	●	★	
22	●	●	●	★	●	★	★ 22.22
24	●	●	●	★	●	★	
25	●	●	●	★	●	★	★ 25.4
28	●	●	●	★	●		★ 28.57
30	●	●	●	★	●	★	★
32	●	●	●	★	●	★	★ 31.75
35	●	●	●	★	●	★	★
36	●	●	●	★	●	★	
38	●	●	●	★	●	★	★ 38.1
40	●	●	●	★	●	★	★
42	●	●		★	●	★	
45	●	●	●	★	●	★	★ 44.45
48	●	●	●		●		
50	●	●	●	★	●	★	★
55	●	●	●	★	●	★	★
60	●	●	●	★	●	★	★

● ◐ ▲ ■ ● ★ ... check Pg.2 for meaning

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Grade	 SUS 403 (H)	 SUS 420J2 (H)	 SUS 430	 S31803 S32205	 SUS 329J4L	 S32750	 S32760
size (mm)	Density ▶ 7.75	7.75	7.75	7.8	7.78	7.8	7.8
65	●	●	●	★	●	★	★
70	●	●	●	★	●	★	★
75	●	●	●	★	●	★	★
80	●	●	●	★	●	★	★
85	●	●	●	★	●	★	
90	●	●	●	★	●	★	★
95		●	●	★	●	★	
100	●	●	●	★	●	★	★ 101.6
110	★	★	★	★	★	★	★
120	★	★	★	★	★	★	★ 120.65
130	★	★	★	★	★	★	★
140	★	★	★	★	★	★	
150	★	★	★	★	★	★	★ 152.4
160		★	★	★	★	★	★
170		★	★	★	★		★
180		★	★	★	★	★	★
190		★	★	★	★		
200		★	★	★	★	★	★ 203.2
210		★ NEW		★	★		
220		★ NEW			★		
230		★ NEW		★	★	★ 228.6	★
250		★ NEW		★	★	★ 254	★
280		★ NEW		★	★ NEW	★	
300		★ NEW		★	★ NEW	★	
330				★			
350				★			

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Stainless Steel

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Stainless Steel (Participation Hardening)

Grade									
size (mm)	Density ▶ 7.78	7.78	7.78	7.78	7.78	7.78	7.78	7.94	7.94
8								★	
10		● h9	● h9	● h9	● h9	● h9		★	★ NEW
12		● h9	● h9	● h9	● h9	● h9			
13		● h9	● h9	● h9	● h9	● h9		★	★ NEW
14	●				●				
16	●	●	●	●	●	★	★	★	★ NEW
19	●								
20	●	●	●	●	●	★	★	★	★ NEW
22	●	●	●	●	●	★	★	★	★ NEW
24	●	●			●			★ NEW	
25	●	●	●	●	●	★	★	★	★ NEW
26	●								
28	●	●	●	●	●			★	
30	●	●	●	●	●	★	★	★	★ NEW
32	●	●	●	●	●			★ NEW	
35						★	★	★	★ NEW
36	●	●	●	●	●			★ NEW	
38	●	●	●	●	●			★ NEW	
40	●	●	●	●	●	★	★	★	★ NEW
42	●	●	●	●	●			★ NEW	
45	●	●	●	●	●	★	★	★	★ NEW
48	●	●	●	●	●				
50	●	●	●	●	●	★	★	★	★ NEW
55	●	●	●	●	●	★	★	★	★ NEW

● ◐ ▲ ■ ● ★ ... check Pg.2 for meaning

Grade									
size (mm)	Density ▶ 7.78	7.78	7.78	7.78	7.78	7.78	7.78	7.94	7.94
60	●	●	●	●	●	★	★	★	★ NEW
65	●	●	●	●	●	★	★	★	
70	●	●	●	●	●	★	★	★	★ NEW
75	●	●	●	●	●			★	
80	●	●	●	●	●	★	★	★	★ NEW
85	●	●	●	●	●			★	
90	●	●	●	●	●	★	★	★	★ NEW
95	●	●	●	●	●			★	
100	●	●	●	●	★	★	★	★	
110	★	★	★	★	★				
120	★	★	★	★	★	★			
130	★	★	★	★	★	★ 135		★	
140	★	★	★	★	★				
150	★	★	★	★	★	★		★	
160	★	★	★		★	★			
170	★	★	★		★				
180	★	★	★		★	★			
190	★	★	★		★				
200	★	★	★		★	★			
210		★ NEW			★ NEW				
220		★ NEW			★ NEW				
230		★ NEW			★ NEW				
250		★ NEW			★ NEW				

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Stainless Steel Hexagon Bar

Grade							
size (mm)	Density ▶ 7.93	7.93	7.93	7.98	7.98	7.98	7.98
5.5			●				
6			●				
7			●				
8	△		▲	▲	▲		
10	△		▲	▲	▲		▲
11			▲				
12	△		▲	▲	▲		
13	△		▲	▲	▲		▲
14	△	★	▲	▲	▲		
17	△	★	▲	★	★	★	★
19	△	★	▲	★	★	★	★
21	△	★	▲	★	★		★
22	☆	★	★	★	★		★
23	☆			★	★		
24	☆	★	★	★	★	★	★
26	☆	★	★	★	★		★
27	☆	★	★	★	★		★
29	☆	★		★	★		
30	☆	★	★	★	★	★	★
32	☆	★	★	★	★		★
35	☆	★		★	★		
36	☆	★	★	★	★		★
38	☆	★		★	★		
41	☆	★	★	★	★		★
46	☆	★	★	★	★		★
50	☆	★		★	★		
55	☆	★		★	★		
60	☆	★		★	★		
65	☆	★		★	★		
70	☆	★		★	★		
75	☆			★			
80	☆			★			

..... A/F60mm & Larger - Hot Finish

Grade						
size (mm)	Density ▶ 7.8	7.75	7.75	7.78	7.8	7.78
5.5						
6						
7						
8			▲			
10		▲	▲	★		
11						
12						
13		▲	▲	★		★
14		▲	▲			
17	★	★	★	★	★	★
19	★	★	★	★	★	★
21	★	★	★			
22	★	★	★	★		★
23		★				
24	★	★	★	★	★	★
26	★	★	★			
27	★	★	★	★		
29		★				
30	★	★	★	★	★	★
32	★	★	★	★	★	★
35		★	★			
36	★	★	★	★	★	★
38		★				
41	★	★	★	★		
46	★	★	★	★	★	
50		★			★	
55		★			★	
60		★				
65		★				

● ◐ ▲ ■ ● ★ ... check Pg.2 for meaning

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Stainless Steel Knurled Round Bar				
Grade				
size (mm)	SUS304 Check	SUS304 Stripe	SUS303 Check	SUS303 Stripe
6				
8				
10				
12				
16				
18				
19				
20				
22				
24				
30				
Pitch ▶ Check 1.11 ▶ Module 0.33 ▶ Stripe 1.05 ※ all 2000L ● ◐ ▲ ■ ● ★ ... check Pg.2 for meaning				

Stainless Steel Cold Square Bar			
Grade			
size (mm)	SUS304 SQ.Bar		
	Density ▶ 7.93		
5		20	
6		22	
7		25	
8		26	
9		30	
10		32	
12		38	
13		40	
14		45	
15		50	
16			
17			
19			

INFORMATION

CUTTING

Various IoT-equipped cutting machines are used to achieve highly efficient cutting and quick delivery !

STRENGTH

- ▶ No MOQ
- ▶ Quick Delivery
 - 1day ARO for small lot orders
- ▶ Precision Cutting
 - Length Tolerance : -0, +1
 - Cut Length : 7mm ~

Type	Maker	Model	Qty
Bandsaw	AMADA	PCSAW530-AX	1
	AMADA	PCSAW430-AX	4
	DAITO	UGAII 330	9
	AMADA	PCSAW330	1
	AMADA	HFA300	4
	DAITO	UGA260	4
Circular Saw	TSUNE	TK80GL	2
	TSUNE	TK70GL	3
Total Machines			28



MEMO

| High Nickel Alloy & Titanium |

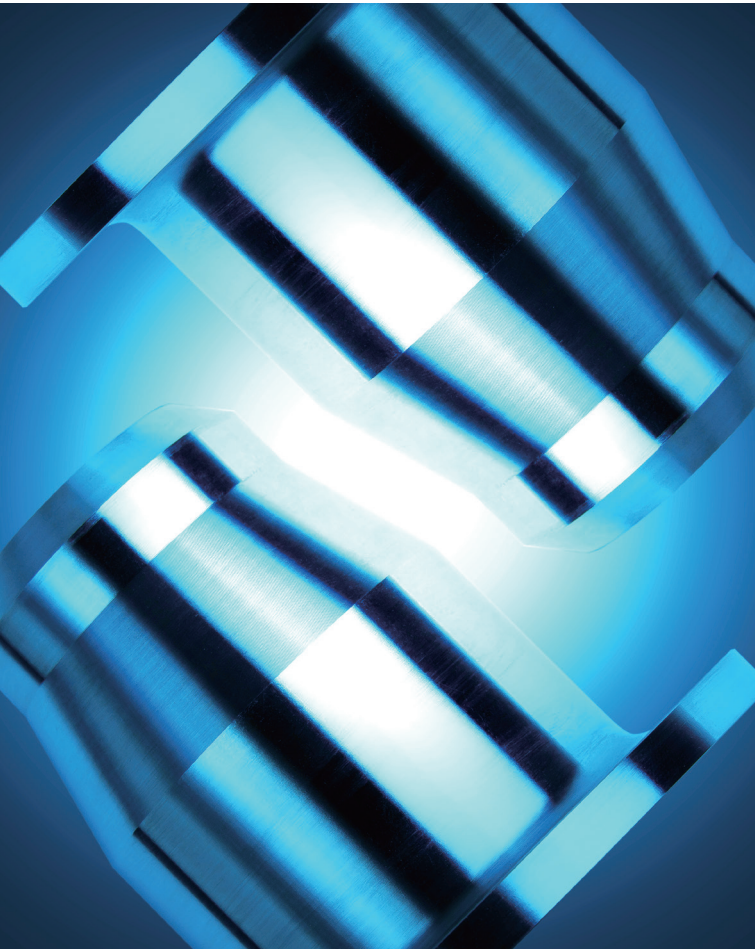
Stainless Steel

Machinings

Reference

Out Sourceable List

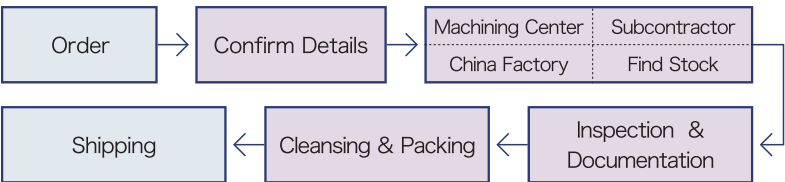
MACHINE PROCESSING



High Quality Products Made with Advanced Technology

Our Precision Processing Group accepts requests for all kinds of metal processings that includes machining (NC and MC multi-purpose lathe), hot and warm forging, cold forging, laser processing, ring forging etc in a wide range of material grades. In order to manufacture products to your specifications, OSC equipped with a variety of advanced inspection machines and precision measuring instruments.

► Production Flow



► In-house Machining Facilities

NC Lathe	OKUMA	Genos L250H	x2	φ200mm x 300mm
	MIYANO	LX-01	x1	φ150mm x 300mm
	OKUMA	LB4000 EXII NEW	x2	φ450mm x 750mm
	TAKAMATSU	X-150	x1	φ290mm x 300mm
Bar feeder	CITIZEN	BNA-42SY5	x1	φ42mm x 100mm
	MIYANO	BND-34	x1	φ30mm x 200mm
	OKUMA	LB-9	x1	φ35mm x 200mm
Bench Lathe		x	2	



► Alloy C22 Centrifuge Machine Component



| High Nickel Alloy & Titanium |

Stainless Steel |

Machinings

| Reference

| Out Sourceable List |

▶ Nickel Alloy & Stainless Various Component



▶ Semi-Conductor, Aerospace, Plant, Stocker System Components



| High Nickel Alloy & Titanium |

Stainless Steel |

Machinings

| Reference

| Out Sourceable List |

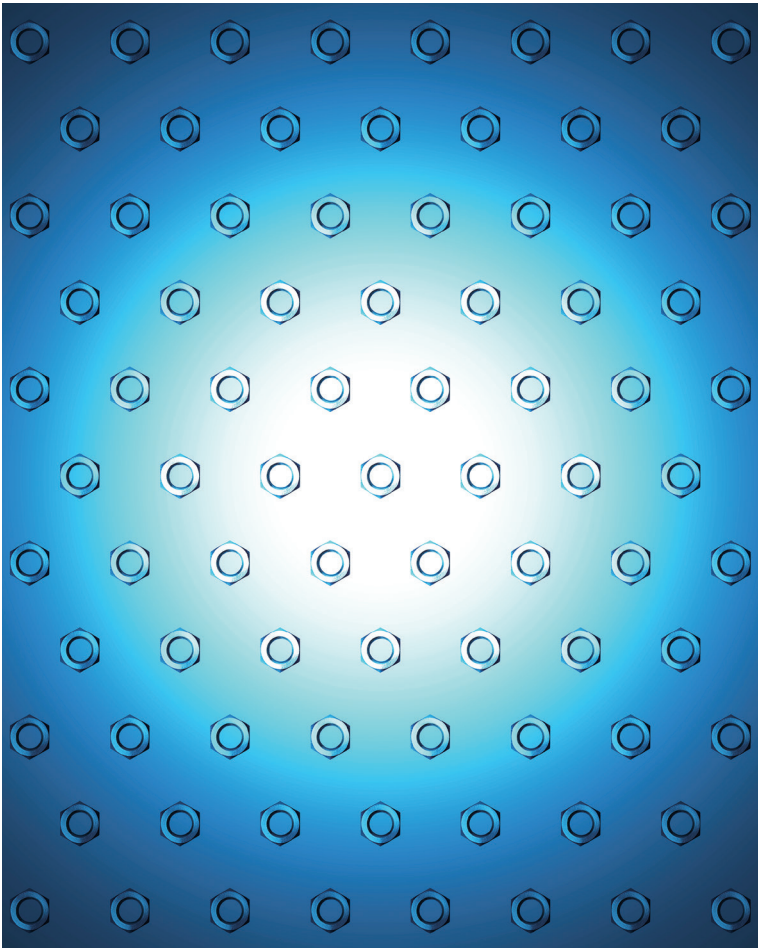
▶ Nickel Alloy & Stainless Various Component



▶ Semi-Conductor, Aerospace, Plant, Stocker System Components



QUALITY CONTROL



Advanced High-Quality Control Equipment

Facilities to meet your various quality request.
Our laboratory equipped with various types of high-tech quality control equipment to meet your demand for precision parts, and metallurgical needs.

▶ CNC Coordinate Measuring Machines Mitutoyo Crysta-Apex C574

Measurement allows us more reliable dimensional inspection for severe requirement for critical applications.

Max. Measurement Dimension
500mm(W) x 700mm(L) x 400mm(H)
Measuring Tolerance:
1/1000mm



▶ Handheld Alloy Analyzer Niton: XRF Analyzer x 6 Hitachi Hi-Tech: Laser Analyzer x 1

OSC equip 5 Mobile XRF Analyzer for our dispatch section.
100% PMI before shipment is our standard procedure for international shipment.



▶ Combination Surftest/ Contracer Unit Mitutoyo FTA-H8D3000-D

FTA-H8D3000 series is a surface roughness/contour combination measuring machine that functions as a Surftest and a Contracer just by replacing the detecting unit.



▶ Automatic Ultrasonic Cleanser Alex AWM-4US3TR

Ultrasonic Cleansing using RO filtered "PURE WATER" , and Surfactant will finish the product in Super Clean Condition.



▶ Digital Microscope KEYENCE VHX-2000

Maginification
VH-Z20R x20 upto x 200
VH-Z100UW x100 upto x 1000



▶ Image Measurement System KEYENCE IM-6000

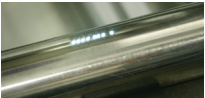
A small daily inspections like the inner diameter, the pitch, and the angle, etc. as well as a complex part on the drawing. High-precision inspection in 99 points can be done at a time only by putting the finished product on the measurement area.
Measuring Tolerance:
5/1000mm



▶ Laser Marker OMRON MX-Z2050

High Speed, High Quality and clean marking.

Marking Area:
160mm x 160mm



▶ Other Measuring Equipment

Profile Projector
Straightness Measuring Instrument
Rockwell Hardness Tester
Portable Hardness Tester
Radiation Dosimeter / Gauss Meter
Various type of caliper and gauge

High Nickel Alloy Stock Profile

Alloy C276 UNS N10276 Specification ▶ ASTM B574 ASME SB574 NACE MR0175 NACE MR0103 Density ▶ 8.89	Has outstanding durability under reductive and oxidative environment. Has good corrosion resistance at weld heated area, and also shows outstanding resistance to pitting and stress corrosion. <table><tr><td>Major Chemical Composition (%)</td><td>Ni</td><td>Cr</td><td>Mo</td><td>Cu</td><td>Fe</td></tr><tr><td></td><td>55.0</td><td>16.0</td><td>16.0</td><td>-</td><td>6.0</td></tr><tr><td></td><td colspan="5">etc W 4.0</td></tr></table> <table><tr><td>Typical Mechanical Property (RT)</td><td>Tensile Strength (MPa)</td><td>0.2% Yield Strength (MPa)</td><td>Elongation (%)</td><td>Hardness (HB)</td></tr><tr><td>ST</td><td>794</td><td>402</td><td>60</td><td>195</td></tr></table>	Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe		55.0	16.0	16.0	-	6.0		etc W 4.0					Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)	ST	794	402	60	195										
Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe																																		
	55.0	16.0	16.0	-	6.0																																		
	etc W 4.0																																						
Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)																																			
ST	794	402	60	195																																			
Alloy B2 UNS N10665 Specification ▶ ASTM B335 ASME SB335 Density ▶ 9.24	Has outstanding corrosion resistance to non-oxidative acids, especially to hydrochloric acid because it contains large amount of Mo. <table><tr><td>Major Chemical Composition (%)</td><td>Ni</td><td>Cr</td><td>Mo</td><td>Cu</td><td>Fe</td></tr><tr><td></td><td>69.0</td><td>-</td><td>28.0</td><td>-</td><td>1.0</td></tr><tr><td></td><td colspan="5">etc C0.01 Si 0.05</td></tr></table> <table><tr><td>Typical Mechanical Property (RT)</td><td>Tensile Strength (MPa)</td><td>0.2% Yield Strength (MPa)</td><td>Elongation (%)</td><td>Hardness (HB)</td></tr><tr><td>ST</td><td>892</td><td>411</td><td>60</td><td>185</td></tr></table>	Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe		69.0	-	28.0	-	1.0		etc C0.01 Si 0.05					Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)	ST	892	411	60	185										
Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe																																		
	69.0	-	28.0	-	1.0																																		
	etc C0.01 Si 0.05																																						
Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)																																			
ST	892	411	60	185																																			
Alloy 22 UNS N06022 Specification ▶ ASTM B574 ASME SB574 NACE MR0175 NACE MR0103 Density ▶ 8.69	Ni-Cr-Mo alloy containing W(tungsten), and has outstanding resistance to a wide range of corrosion in both reductive and oxidative environments. <table><tr><td>Major Chemical Composition (%)</td><td>Ni</td><td>Cr</td><td>Mo</td><td>Cu</td><td>Fe</td></tr><tr><td></td><td>57.0</td><td>20.5</td><td>14.2</td><td>-</td><td>2.3</td></tr><tr><td></td><td colspan="5">etc W3.2 V0.25 C0.01</td></tr></table> <table><tr><td>Typical Mechanical Property (RT)</td><td>Tensile Strength (MPa)</td><td>0.2% Yield Strength (MPa)</td><td>Elongation (%)</td><td>Hardness (HB)</td></tr><tr><td>ST</td><td>794</td><td>402</td><td>57</td><td>197</td></tr></table>	Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe		57.0	20.5	14.2	-	2.3		etc W3.2 V0.25 C0.01					Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)	ST	794	402	57	197										
Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe																																		
	57.0	20.5	14.2	-	2.3																																		
	etc W3.2 V0.25 C0.01																																						
Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)																																			
ST	794	402	57	197																																			
Alloy 20 UNS N08020 Specification ▶ ASTM B473 ASME SB473 NACE MR0175 Density ▶ 8.08	Shows outstanding corrosion resistance to reductive acids, especially to sulfuric acid and outstanding mechanical properties, and is easily processable. <table><tr><td>Major Chemical Composition (%)</td><td>Ni</td><td>Cr</td><td>Mo</td><td>Cu</td><td>Fe</td></tr><tr><td></td><td>35.0</td><td>20.0</td><td>2.5</td><td>3.5</td><td>37.0</td></tr><tr><td></td><td colspan="5">etc Nb+Ta1.0</td></tr></table> <table><tr><td>Typical Mechanical Property (RT)</td><td>Tensile Strength (MPa)</td><td>0.2% Yield Strength (MPa)</td><td>Elongation (%)</td><td>Hardness (HB)</td></tr><tr><td>An</td><td>617</td><td>274</td><td>50</td><td>184</td></tr></table>	Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe		35.0	20.0	2.5	3.5	37.0		etc Nb+Ta1.0					Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)	An	617	274	50	184										
Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe																																		
	35.0	20.0	2.5	3.5	37.0																																		
	etc Nb+Ta1.0																																						
Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)																																			
An	617	274	50	184																																			
Alloy 200/201 UNS N02200 / 02201 Specification ▶ ASTM B160 ASME SB160 Density ▶ 8.89	Unalloyed wrought Ni having good mechanical properties, outstanding corrosion resistance, and useful thermal and electrical conductivities. Suitable for use at temperature of 315C or higher, compared to Alloy 200. <table><tr><td>Major Chemical Composition (%)</td><td>Ni</td><td>Cr</td><td>Mo</td><td>Cu</td><td>Fe</td></tr><tr><td></td><td>99.5</td><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td></td><td colspan="5">etc C0.01</td></tr></table> <table><tr><td>Typical Mechanical Property (RT)</td><td>Tensile Strength (MPa)</td><td>0.2% Yield Strength (MPa)</td><td>Elongation (%)</td><td>Hardness (HB)</td></tr><tr><td>H.W</td><td>372</td><td>117</td><td>50</td><td>90</td></tr><tr><td>C.W</td><td>539</td><td>441</td><td>20</td><td>160</td></tr><tr><td>An</td><td>392</td><td>117</td><td>50</td><td>90</td></tr></table>	Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe		99.5	-	-	-	-		etc C0.01					Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)	H.W	372	117	50	90	C.W	539	441	20	160	An	392	117	50	90
Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe																																		
	99.5	-	-	-	-																																		
	etc C0.01																																						
Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)																																			
H.W	372	117	50	90																																			
C.W	539	441	20	160																																			
An	392	117	50	90																																			
Alloy 400 UNS N04400 Specification ▶ ASTM B164 ASME SB164 NACE MR0175 NACE MR0103 Density ▶ 8.83	Ni-Cu Alloy with good weldability and good workability, and outstanding corrosion resistance in a wide range of marine and chemical environments. <table><tr><td>Major Chemical Composition (%)</td><td>Ni</td><td>Cr</td><td>Mo</td><td>Cu</td><td>Fe</td></tr><tr><td></td><td>66.5</td><td>-</td><td>-</td><td>31.5</td><td>1.2</td></tr><tr><td></td><td colspan="5">etc -</td></tr></table> <table><tr><td>Typical Mechanical Property (RT)</td><td>Tensile Strength (MPa)</td><td>0.2% Yield Strength (MPa)</td><td>Elongation (%)</td><td>Hardness (HB)</td></tr><tr><td>H.W</td><td>637</td><td>490</td><td>45</td><td>190</td></tr><tr><td>C.W/DC</td><td>686</td><td>539</td><td>30</td><td>110</td></tr><tr><td>An</td><td>559</td><td>255</td><td>48</td><td>135</td></tr></table>	Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe		66.5	-	-	31.5	1.2		etc -					Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)	H.W	637	490	45	190	C.W/DC	686	539	30	110	An	559	255	48	135
Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe																																		
	66.5	-	-	31.5	1.2																																		
	etc -																																						
Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)																																			
H.W	637	490	45	190																																			
C.W/DC	686	539	30	110																																			
An	559	255	48	135																																			
Alloy K500 UNS N05500 Specification ▶ ASTM B865 NACE MR0175 NACE MR0103 QQ-N-286 Density ▶ 8.47	Its basic composition is similar to that of Alloy 400 but with age-hardening properties imparted by alloying additions of Al and Ti. <table><tr><td>Major Chemical Composition (%)</td><td>Ni</td><td>Cr</td><td>Mo</td><td>Cu</td><td>Fe</td></tr><tr><td></td><td>66.5</td><td>-</td><td>-</td><td>29.5</td><td>1.0</td></tr><tr><td></td><td colspan="5">etc Al 2.7 Ti 0.6</td></tr></table> <table><tr><td>Typical Mechanical Property (RT)</td><td>Tensile Strength (MPa)</td><td>0.2% Yield Strength (MPa)</td><td>Elongation (%)</td><td>Hardness (HB)</td></tr><tr><td>H.W/AG</td><td>1078</td><td>902</td><td>25</td><td>305</td></tr><tr><td>C.W/AG</td><td>1078</td><td>902</td><td>22</td><td>310</td></tr><tr><td>An/AG</td><td>1000</td><td>686</td><td>28</td><td>285</td></tr></table>	Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe		66.5	-	-	29.5	1.0		etc Al 2.7 Ti 0.6					Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)	H.W/AG	1078	902	25	305	C.W/AG	1078	902	22	310	An/AG	1000	686	28	285
Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe																																		
	66.5	-	-	29.5	1.0																																		
	etc Al 2.7 Ti 0.6																																						
Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)																																			
H.W/AG	1078	902	25	305																																			
C.W/AG	1078	902	22	310																																			
An/AG	1000	686	28	285																																			

An - Annealed

C.W - Cold Worked

DC - Distortion Correction

RT - Room Temperature

H.W - Hot Worked

AG - Aged

ST - Solution Annealed

Disclaimer : All the information on this table is published in good faith and for general information purpose only and not for technical design purposes. We do not make any warranties about the completeness, reliability and accuracy of this information. Any action you take upon the information on this table is strictly at your own risk, and we will not be liable for any losses and damages in connection with the use of this table.

Alloy	600	UNS N06600	Specification ▶	ASTM B166 ASME SB166 AMS 5665 NACE MR0103	Density ▶	8.42	Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe
								76.0	15.5	-	-	8.0
								etc -				
Typical Mechanical Property (RT)			Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)						
	H.W	706	431	38	180							
	C.W	882	706	20	235							
	An	608	284	45	145							

Alloy	601	UNS N06601	Specification ▶	ASTM B166 ASME SB166	Density ▶	8.11	Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe
								60.5	23.0	-	-	14.1
								etc Al1.4				
Typical Mechanical Property (RT)			Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)						
	ST	686	294	55	130							

Alloy	625	UNS N06625	Specification ▶	ASTM B446 ASME SB446 AMS 5666 NACE MR0175 NACE MR0103	Density ▶	8.44	Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe
								61.0	21.5	9.0	-	2.5
								etc Nb+Ta3.7				
Typical Mechanical Property (RT)			Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)						
	H.W	980	588	45	210							
	An	931	539	45	180							

Alloy	718	UNS N07718	Specification ▶	ASTM B637 ASME SB637 AMS 5662 AMS 5663	Density ▶	8.19	Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe
								52.5	19.0	3.0	-	18.5
								etc Ti0.9 Nb+Ta5.1				
Typical Mechanical Property (RT)			Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)						
	H.W/AG	1372	1225	16	393							
	ST/AG	1343	1176	17	382							

Alloy	800H(T)	UNS N08810 / 08811	Specification ▶	ASTM B408 ASME SB408	Density ▶	7.95	Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe
								32.5	21.0	-	-	46.0
								etc C0.08 (Al+Ti1.0)				
Typical Mechanical Property (RT)			Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)						
	ST	559	245	40	140							

Alloy	X	UNS N06002	Specification ▶	ASTM B572 ASME SB572 AMS 5754	Density ▶	8.3	Major Chemical Composition (%)	Ni	Cr	Mo	Co	Fe
								47.5	21.5	9.0	1.5	18.5
								etc W 0.6				
Typical Mechanical Property (RT)			Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)						
	ST	784	343	45	184							

Alloy	Ti Grade5	AMS4928	Specification ▶	ASTM B348/F1472 ASME SB348 AMS4928 AMS6931 GE S-400	Density ▶		Major Chemical Composition (%)	AL	Fe	O	Ti	V
								6.0	<0.25	<0.2	90.0	4.0
								etc W 0.6				
Typical Mechanical Property (RT)			Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)						
	An	950	880	14	334							

◆ Inconel, Incoloy, and Monel are registered trademarks of Special Metal Corporation.
◆ Carpenter is a registered trademark of Carpenter Technology Corporation.
◆ Hastelloy is a registered trademark of Haynes International, Inc.

The values in the tables are only for reference, and not guaranteed maximum values or minimum values.
For detailed information, please contact us.

| High Nickel Alloy & Titanium |
Stainless Steel |
Machinings |
Reference |
Out Sourceable List

Available Nickel Alloy Stock from Global Partners			
Alloy	Round Bar	Plate / Sheet	Pipe
	Min - Max	Min - Max	
Alloy 20	4.76 - 279.4	1.6 - 50.8	○
Alloy 200/201	9.52 - 190.5	0.1 - 50.8	○
Alloy 31	-	2 - 25	
Alloy 400	4.76 - 279.5	0.45 - 76.2	○
Alloy K500	12.7 - 304.8	0.81 - 50.8	
Alloy 59	50 - 200	2 - 20	△
Alloy 600	8 - 203.2	0.41 - 76.2	○
Alloy 601	6.35 - 76.2	0.5 - 50.8	○
Alloy 617	19.05 - 152.4	0.4 - 50.8	
Alloy 625	4.76 - 400	0.25 - 101.6	○
Alloy 686	-	1.58 - 38.1	
Alloy 718 API6A / NACE	12.7 - 350	-	
Alloy 718 AMS5662	6.35 - 305	0.25 - 101.6	
Alloy 718 AMS5663	4.75 - 203.2	-	
Alloy 800H/HT	12.7 - 203.2	0.51 - 50.8	○
Alloy 825	6 - 350	0.81 - 50.8	○
Alloy B2/B3	10 - 203.2	0.53 - 31.8	
C2000	12.7 - 203.2	0.63 - 25.4	
Alloy C22	3.18 - 279.4	0.5 - 50.8	○
Alloy C276	3.18 - 279.4	0.35 - 63.5	○
Alloy 925	12.7 - 279	-	
Alloy X750	4.76 - 203.2	0.13 - 63.5	
MP35N	12.7 - 76.2	-	
HY MU 80	41.28 - 45.12	0.25 - 6.35	
N155 (Mulimet)	3.94 - 63.5	0.46 - 38.1	
330	3.17 - 152.4	0.7 - 76.2	○
Rene41	6.73 - 82.8	0.36 - 12.7	
Ti6Al - 4V	9.52 - 152.4	0.64 - 101.6	
Ti6Al - 4V ELI	3.18 - 88.9	19.05 - 165.1	
Alloy 36	3.18 - 250	0.38 - 152.4	
Alloy 42	-	6.35 - 38.1	
Kovar	1.59 - 31.75	0.8 - 25.4	
Super Invar	12.7 - 102	6.35 - 50.8	
Stellite 6B	9.52 - 89.2	-	
Alloy 75	6.35 - 76.2	0.5 - 16	
Alloy 80A	3 - 127	-	
Alloy 263	12.7 - 152.4	1 - 38.1	
Hastelloy X	9.78 - 254	0.25 - 76.2	
HA188	9.78 - 168.27	0.25 - 50.8	
HA230	9.78 - 152.4	0.4 - 38.1	
HA242	7.93 - 25.4	-	
HS25 (L605)	5.2 - 168	0.25 - 38.1	
Waspaloy	11.5 - 50.8	0.3 - 19.05	

○Various sizes available in stock. △Only limited sizes available in stock.

Available Stainless Steel Stock from Global Partners			
Alloy	Round Bar	Plate / Sheet	Pipe
	Min - Max	Min - Max	
253MA	12.7 - 101.6	1.5 - 50.8	○
S32760	12.7 - 580	2 - 100	○
S32750	12.7 - 500	3 - 88.9	○
S31803 / 32205	8 - 580	2 - 152.4	○
Alloy 255 (Ferralium255)	12.7 - 355.6		
446	0.35 - 101.6		△
A286	8 - 215	0.25 - 101.6	○
304H	19.05 - 355.6	4.8 - 152.4	○
309/S	3.17 - 457.2	0.97 - 76.2	△
310/S	3 - 300	0.3 - 76.2	
316Ti	7 - 625	1 - 110	○
317L	3.17 - 457.2	2 - 101.6	○
321	10 - 520	1.5 - 101.6	○
347 / 347H	12 - 415	4.8 - 101.6	
13-8Mo	12.7 - 215.9	1.65 - 101.6	
15-5PH	11.11 - 203	4.76 - 50.8	
17-4PH (630)	3 - 502	4.8 - 101.6	
17-4PH H1150 D	25.4 - 480		
Custum455	12.7 - 107.95		
XM-19 (Nitronic50)	12.7 - 400		
Alloy218 (Nitronic60)	9.52 - 406.2	4.7 - 51	
403	3 - 450	-	
410	10 - 360	4 - 101.6	
410S	-	1.5 - 76.2	
416 / 416HT	2 - 457.2		
420J2	2.5 - 400	10 - 75	
420F	18 - 400		
420	5 - 500		
430	2 - 200	0.3 - 50	
431	2 - 500		
430F	1.5 - 400		
440C	3 - 400	3 - 250	
S31254 (F44)	8 - 400	2 - 80	△
N08367	9.52 - 203.2	0.6 - 76.2	
904L	6 - 400	2 - 65	○

○Various sizes available in stock. △Only limited sizes available in stock.

| High Nickel Alloy & Titanium |
Stainless Steel |
Machinings |
Reference |
Out Sourceable List