



OSAKA STAINLESS
NICKEL ALLOYS & MORE

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HEAD OFFICE



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MATERIAL CENTER



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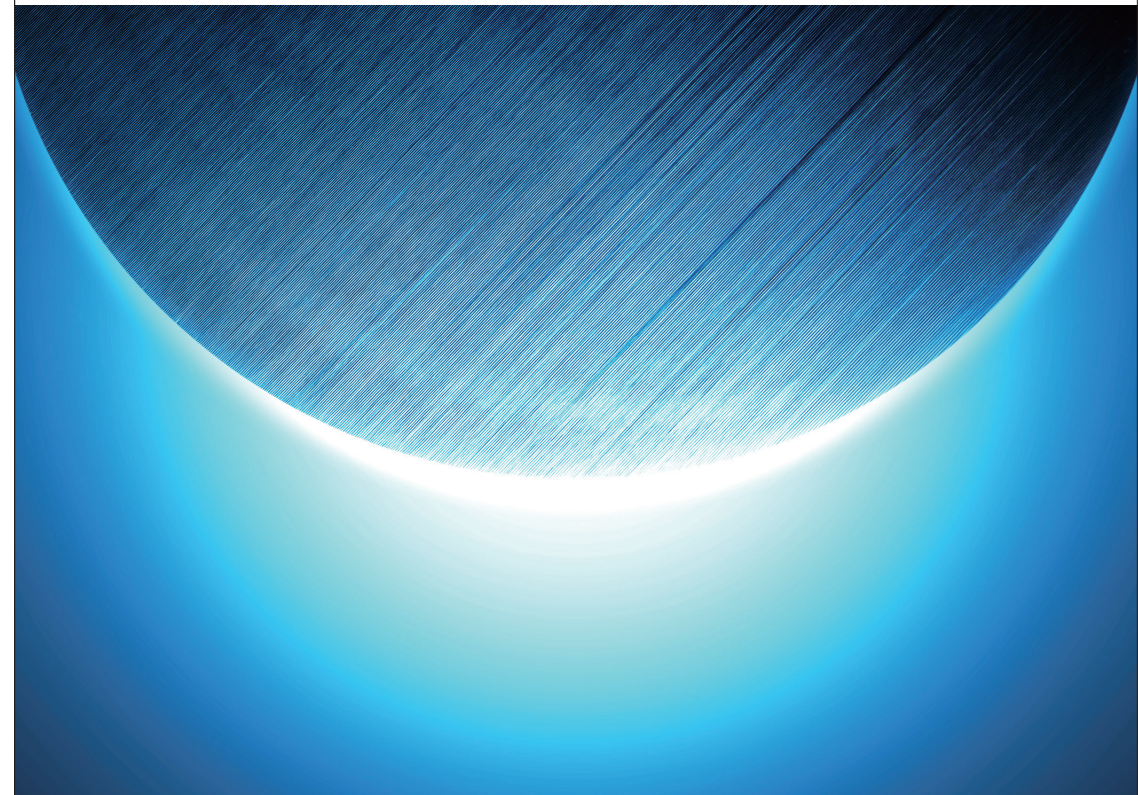
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OSAKA STAINLESS

2022

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

15 different Nickel Alloy Grades, and 29 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	φ150	ALLOY X	(AMS5754)	φ13	φ160
17-4PH H1025	(AMS5643)	φ16	φ100	ALLOY 625	(AMS5666)	φ6	φ330	
ALLOY 718 ST	(AMS5662)	φ6	φ300	A286	(AMS5732)	φ8	φ127	
ALLOY 718 AG	(AMS5663)	φ8	φ300	321	(AMS5645)	φ12.7	φ82.5	

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	HQ, Kawaguchi Material Center/Cutting Factory/Warehouse



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OSAKA STAINLESS PRODUCT CATALOG 2020

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	
▶ ALLOY 400 (Monel 400) UNS N04400	▶ ALLOY 718 ST (Incoloy 718) UNS N07718	

Stainless Steel

▶ P.11 -

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

Machinings

- ▶ P.10 Bolt • Nut • Washer • Flange
- ▶ P.21 Processed Parts Samples

Reference

- ▶ P.25 Quality Control Facilities
- ▶ P.27 Nickel Alloy Profile

Out Sourceable List

- ▶ P.29 Available Stock from OSC's local partner

2022 UPDATE

- New Stock Size ▶ 321/321H, 17-4PH, A286
- New Machining Facility ▶ Bar Feeder
- New Inspection Facility ▶ Handheld Alloy Analyzer
- ▶ Surftest/Contracer Unit

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 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 				
 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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 ALLOY B2	Hastelloy B2	ASTM B335 / B564 ★ ASME SB335 / SB564 ★	12 - 250							<input type="radio"/>		
 ALLOY 22	Hastelloy C22	ASTM B574 / B564 ★ ASME SB574 / SB564 ★ NACE MR0175 (ISO15156) NACE MR0103	1.2 - 350	10 - 30	M6 - M16	M6 - M12	M5 - M20	10K 20A-100A	• Corrosion Test ASTM G28A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 ALLOY 20	Carpenter 20Cb3	ASTM B473 ASME SB473 NACE MR0103	10 - 250	17 - 30			M10 - M16			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 ALLOY 200 / 201	Nickel 200/201	ASTM B160 / B564 ★ ASME SB160 / SB564 ★	2 - 250	10 - 24			M5 - M16			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 ALLOY 400	Monel 400	ASTM B164 / B564 ★ ASME SB164 / SB564 ★ NACE MR0175 (ISO15156) NACE MR0103	3 - 250	10 - 36			M10 - M16			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 ALLOY K500AG	Monel K500AG	ASTM B865 QQ-N-286 NACE MR0175 (ISO15156) NACE MR0103	10 - 280						• Direct Aged • Charpy Test ASTM A370	<input type="radio"/>		
 ALLOY 825	Incoloy 825	ASTM B425 / B564 ★ ASME SB425 / SB564 ★ NACE MR0175 (ISO15156) NACE MR0103	10 - 250	10 - 24					• Corrosion Test ASTM G28A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 ALLOY 600	Inconel 600	ASTM B166 / B564 ★ ASME SB166 / SB564 ★ AMS 5665 * NACE MR0103	2 - 250	10 - 24			M5 - M16			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 ALLOY 601	Inconel 601	ASTM B166 ASME SB166	2 - 250	10 - 24			M5 - M16			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 ALLOY 625	Inconel 625	ASTM B446 / B564 ★ ASME SB446 / SB564 ★ NACE MR0175 (ISO15156) NACE MR0103 AMS 5666 GE S-400 GE S-1000	2 - 330	10 - 24			M10 - M16		• GRADE1 • Corrosion Test ASTM G28A	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 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	<input type="radio"/>		<input type="radio"/>
 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	<input type="radio"/>		<input type="radio"/>
 ALLOY 800H / HT	Incoloy 800H/HT	ASTM B408 / B564 ★ ASME SB408 / SB564 ★	10 - 250	17 - 24			M10 - M16			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 ALLOY X	Hastelloy X	ASTM B572 ASME SB572 AMS 5754 GE S400 GE S-1000	13 - 160							<input type="radio"/>		<input type="radio"/>

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

★ - Apply to forged bars only

OSC conducts PMI to all in-coming and out-going process for Nickel Alloy products.

○ ... Sourceable in Japan
 △ ... Sourceable from Overseas

High Nickel Alloy Round Bar

Grade	UNS N10276	UNS N10665	UNS N06022	UNS N08020	N02200/N02201	UNS N04400	UNS N05500
	ALLOY C-276	ALLOY B-2	ALLOY 22	ALLOY 20	ALLOY 200 / 201	ALLOY 400	ALLOY K500AG
Size (mm)	Density ▶ 8.89	9.24	8.69	8.08	8.89	8.83	8.47
1.2			●				
1.6			●				
2	●		●		●		
2.6			●				
3	●		●		●	●	
4	●		●		●	●	
5	●		●		●	●	
5.3	●						
6	▲		▲		▲	▲	
7.1	●						
8	▲		▲		▲	▲	
8.95	▲						
10	▲		▲	▲	▲	●	★
12	★	★	▲	▲	▲	●	★
13	★	★	★	▲	▲	●	★
16	★	★	★	○	★	●	★
18		★	★		★		
19	★			○		●	
20	★	★	★	○	★	●	★
22	★	★	★	○	★	●	★
24	★						
25	★	★	★	○	★	●	★
28	★	★	★	○	★	●	★
30	★	★	★	○	★	●	★
32	★		★	○	★	●	★
35	★	★	★	○	★	●	★
36	★						
38	★		★	○	★	●	★
40	★	★	★	○	★	●	★

● ▲ ■ ● ★ ... check Pg.2 for meaning

● φ13mm & Smaller - h9 tolerance *Exception for old stock

Grade	UNS N08825	UNS N06600	UNS N06601	UNS N06625	UNS N07718	UNS N07718	N08810/N08811	UNS N06002
	ALLOY 825	ALLOY 600	ALLOY 601	ALLOY 625	ALLOY 718 ST	ALLOY 718 AG	ALLOY 800H / HT	ALLOY X
Size (mm)	Density ▶ 8.14	8.42	8.11	8.44	8.19	8.19	7.95	8.3
1.2								
1.6								
2		●	●	●				
2.6								
3		●	●	●				
4		●	●	●				
5		●	●	●				
5.3								
6		▲	▲	▲	▲			
7.1								
8		▲	▲	▲	★	★		
8.95								
10	☆	▲	▲	▲	★	★	★	
12	☆	▲	▲	▲	★	★	★	
13	☆ ^{12.7}	▲	▲	★	★	★	★ ^{12.7}	★
16	○	●	●	★	★	★	●	★
18		●	●	★	★			★
19								
20	○	●	●	★	★	★	●	★
22	○	●	●	★	★	★	●	
24								
25	○	●	●	★	★	★	●	★
28	○	●	●	★	★	★	●	
30	○	●	●	★	★	★	●	★
32	○	●	●	★	★	★	●	
35	○	●	●	★	★	★	●	★
36								
38	○	●	●	★	★	★	●	
40	○	●	●	★	★	★	●	★

● φ13mm & Smaller - h9 tolerance *Exception for old stock

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
	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
42	★		★	●	★	●	★
45	★	★	★	●	★	●	★
50	★	★	★	●	★	●	★
55	★	★	★	●	★	●	★
60	★	★	★	●	★	●	★
65	★	★	★	●	★	●	★
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

Grade	UNS N08825	UNS N06600	UNS N06601	UNS N06625	UNS N07718	UNS N07718	N08810/N08811	UNS N06002
	ALLOY 825	ALLOY 600	ALLOY 601	ALLOY 625	ALLOY 718 ST	ALLOY 718 AG	ALLOY 800H / HT	ALLOY X
	Density ▶ 8.14	8.42	8.11	8.44	8.19	8.19	7.95	8.3
42	○	●	●	★	★	★	●	
45	○	●	●	★	★	★	●	★
50	○	●	●	★	★	★	●	★
55	○	●	●	★	★	★	●	
60	○	●	●	★	★	★	●	★
65	○	●	●	★	★	★	●	
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 & Titanium | Stainless Steel | Machinings | Reference | Out Sourceable List

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 ▶ 8.99	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

Density	Round Bar				Hex Bar	
	4.51				4.51	
size (mm)	3	8	15	30	★ 8	★ 27
	3.5	8.95	16	35	★ 10	★ 30
	4	9	18	40	★ 13	★ 32
	4.4	10	18.3	45	★ 17	★ 36
	5	10.8	20	50	★ 19	★ 41
	5.3	12	22		★ 21	★ 46
	6	13	24		★ 22	
	7	14	25		★ 24	
	7.13	14.6	28			

OSC conducts PMI to all in-coming and out-going process for Nickel Alloy products.



Alloy C276 Alloy 22 SUS329J4L Hex Bolt

ALLOY C-276		length (mm)																		
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		length (mm)																		
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		length (mm)																		
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	
		JIS G4318	JIS G4303	ASTM / ASME			AMS	NACE MR0175 MR0103		EN	Austenitic	Ferritic Martensitic/Duplex				Participation Hardening
				A/SA182	A/SA276	A/SA479					Detail : P.15	Detail : P.17				Detail : P.19
Min - Max (mm)																
SUS304	S30400	○	○	○	○	○	○	○	1.4301	2 - 50	16 - 250			6 - 30	5 - 50	8 - 80
SUS304L	S30403	○	○	○	○	○		○	1.4306	6 - 13	16 - 250					10 - 70
SUS316	S31600	○	○	○	○	○		○	1.4401	2 - 30	16 - 250					8 - 80
SUS316L	S31603	○	○	○	○	○		○	1.4404	2 - 30	20 - 250					8 - 70
SUS316Ti	S31635			○	○	○		○	1.4571		16 - 200					
SUS303	S30300	○	○	○	ASTM A582				1.4305	3 - 30	20 - 100			6 - 30		5.5 - 46
SUS317L	S31703	○	○							8 - 13	16 - 60					17 - 30
SUS310S	S31008	○	○	○	○	○		○	1.4845	3 - 18.3	16 - 150					8 - 46
SUS321/321H	S32100	○	○	○	○	○	5645	○	1.4878	6 - 14	16 - 100					17 - 46
SUS403 (A)	S40300	○								4 - 24						8 - 65
SUS403 (H)	S40300		○									16 - 150				
SUS420J2 (A)	S42000	○								3 - 24						8 - 46
SUS420J2 (H)	S42000		○									16 - 200				
SUS430	S43000	○	○							3 - 20		16 - 200				
SUS440C	S44004	○								3.2 - 14.2						
SUS630	S17400		○							3 - 13		14 - 200				10 - 46
SUS630 H900	S17400		○									10 - 200				
SUS630 H1025	S17400		○									10 - 150				
SUS630 H1075	S17400		○									10 - 150				
SUS630 H1150	S17400		○									10 - 200				
17-4PH ST	S17400			○	ASTM A564 ASME SA564				5643			10 - 160				
17-4PH H1025	S17400			○	ASTM A564 ASME SA564				5643			16 - 100				
A286	S66286			○	ASTM A453/A638 ASME SA453/SA638				5732	○		8 - 127				
SUS329J4L	S31260		○									6 - 250	Duplex Bolt·Nut·Washer Stock Available. Details in P.10			13 - 36
S31803/32205(F51/F60)	SUS329J3L			○	○	○		○	1.4462			10 - 350				13 - 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 - 150				

★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.

Out Source

Plate	Pipe / Tube	Welding Rod / Wire
○	○	○
○	○	○
○	○	○
○	○	○
○	○	○
○	△	○
○		
○		
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Out Sourceable List

○ ... Sourceable in Japan △ ... Sourceable from Overseas

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
	Density ▶7.93	7.93	7.93	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

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Out Sourceable List

Grade	SUS 304	SUS 303	SUS 316	SUS 316L	SUS 310S	SUS 321	SUS 403	SUS 420J2	SUS 430	SUS 440C
	Density ▶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	○	▲	●	●						
30.6	○									
32	○									
33	○									
33.3	○									
34	○									
35	○									
36	○									
38	○									
40	○									
42	○									
45	○									
50	○									

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Out Sourceable List

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	321/321H (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	★ 12.7		
16	○	●		●		★	●	●	★ 15.87	★		★
18	○	●					●					
19	○	●		●			●	●	★ 19.05			
20	○	●	●	●	●	★	●	●	★ NEW 20.64	★		★
22	○	●	●	●	●	★	●	●	★ 22.22	★		★
24	○	●	●	●	●		●	●				
25	○	●	●	●	●	★	●	●	★ 25.4	★		★
26	○	●										
27	○	●		●	●							
28	○	●	●	●	●	★	●	●			★	★
30	○	●	●	●	●	★	●	●			★	★
32	○	●	●	●	●		●	●	★ 31.75	★		★
33	○	●		●	●							
34	○	●										
35	○	●	●	●	●	★	●				★	★
36	○	●	●	●	●		●	●				
38	○	●	●	●	●		●	●			★	★
40	○	●	●	●	●	★	●	●			★	★
42	○	●	●	●	●		●	●	★ 41.27	★		★
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	321/321H (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	○	●	●	●	●	★	●	●			★	
60	○	●	●	●	●	★	●	●			★	★
65	○	●	●	●	●		★		★ 63.5	★		
70	○	●	●	●	●	★	★		★		★	★
75	△	△	△	△	△		★		★ 76.2	★		
80	△	△	△	△	△	★	★		★ 82.55	★		★
85	△	△	△	△	△		★		★			
90	△	△	△	△	△	★	★		★		★	★
95	△	△	△	△	△		★					
100	△	△	△	△	△	★	★		★		★	★
110	☆	☆		☆	☆		☆				★	★
120	☆	☆		☆	☆	★	☆				★	★
130	☆	☆		☆	☆		☆				★	
140	☆	☆		☆	☆		☆				★	
150	☆	☆		☆	☆	★	☆				★	★
160	☆	☆		☆	☆							
170	☆	☆		☆	☆							
180	☆	☆		☆	☆	★						
190	☆	☆		☆	☆							
200	☆	☆		☆	☆	★						
230	☆	☆		☆	☆							
250	☆	☆		☆	☆							

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Ferritic·Martensitic·Duplex Stainless Steel Smooth Turned Round Bar

Grade size (mm)	SUS 403 (H)	SUS 420J2 (H)	SUS 430	S31803 S32205	SUS 329J4L	S32750	S32760
	Density ▶ 7.75	7.75	7.75	7.8	7.78	7.8	7.8
6					h9		
8					h9		
10				h9	h9	h9	
12				h9	h9	h9	☆ 12.7
13				h9	h9	h9	
16	●	●	●	★	●	★	☆ 15.88
18	●	●	●		▲		
19							☆ 19.05
20	●	●	●	★	●	★	
22	●	●	●	★	●	★	☆ 22.22
24	●	●	●	★	●	★	
25	●	●	●	★	●	★	☆
28	●	●	●	★	●		☆ 28.57
30	●	●	●	★	●	★	☆
32	●	●	●	★	●	★	☆ 31.75
35	●	●	●	★	●	★	☆
36	●	●	●	★	●	★	
38	●	●	●	★	●	★	☆ 38.1
40	●	●	●	★	●	★	☆
42	●	●	●	★	●	★	
45	●	●	●	★	●	★	☆
48	●	●	●		●		
50	●	●	●	★	●	★	☆
55	●	●	●	★	●	★	☆
60	●	●	●	★	●	★	☆

● ▲ ■ ● ★ ... check Pg.2 for meaning

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Out Sourceable List

Grade size (mm)	SUS 403 (H)	SUS 420J2 (H)	SUS 430	S31803 S32205	SUS 329J4L	S32750	S32760
	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	★	★	★	★	★	★	☆
130	★	★	★	★	★	★	☆
140	★	★	★	★	★	★	
150	★	★	★	★	★	★	☆
160		★	★	★	★	★	☆
170		★	★	★	★		
180		★	★	★	★	★	☆
190		★	★	★	★		
200		★	★	★	★	★	☆ 203.2
210				★	★		
220					★		
230				★	★	★	☆
250				★	★	★	☆
280				★		★	
300				★		★	
330				★			
350				★			

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Stainless Steel

Machinings

Reference

Out Sourceable List

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

Stainless Steel (Participation Hardening)

Grade	SUS 630	SUS 630H900	SUS 630H1025	SUS 630H1075	SUS 630H1150	17-4PH	17-4PH H1025	A286 (660)
size (mm)	Density▶7.78	7.78	7.78	7.78	7.78	7.78	7.78	7.94
8								★
10		●h9	●h9	●h9	●h9	●h9		★
12		●h9	●h9	●h9	●h9	●h9		
13		●h9	●h9	●h9	●h9	●h9		★
14	○				○			
16	○	●	●	●	●	★	★	
19	○							
20	○	●	●	●	●	★	★	★
22	○	●	●	●	●	★	★	★
24	○	●	●	●	●			
25	○	●	●	●	●	★	★	★
26	○							
28	○	●	●	●	●			★
30	○	●	●	●	●	★	★	★
32	○	●	●	●	●			
35						★	★	★
36	○	●	●	●	●			
38	○	●	●	●	●			
40	○	●	●	●	●	★	★	★
42	○	●	●	●	●			
45	○	●	●	●	●	★	★	★
48	○	●	●	●	●			
50	○	●	●	●	●	★	★	★
55	○	●	●	●	●	★	★	★
60	○	●	●	●	●	★	★	★
65	○	●	●	●	●	★	★	★
70	○	●	●	●	●	★	★	★
75	○	●	●	●	●			
80	○	●	●	●	●	★	★	★
85	○	●	●	●	●			
90	○	●	●	●	●	★	★	★88.9
95	○	●	●	●	●			
100	○	●	●	●	●	★	★	★101.6
110	★	★	★	★	★			
120	★	★	★	★	★			★127
130	★	★	★	★	★	★NEW 135		
140	★	★	★	★	★			
150	★	★	★	★	★	★NEW		
160	★	★	★	★	★	★NEW		
170	★	★						
180	★	★						
190	★	★						
200	★	★						

●▲■◆★ ... check Pg.2 for meaning

Stainless Steel Knurled Round Bar

Grade	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

Stainless Steel Cold Square Bar

Grade	SUS304 SQ.Bar		
size (mm)	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	○		

Stainless Steel Hexagon Bar

Grade	SUS 304	SUS 304L	SUS 303	SUS 316	SUS 316L	SUS 317L	SUS 310S	SUS 321	SUS 403	SUS 420J2	SUS 630	S31803 S32205	SUS 329J4L
size (mm)	Density▶7.93	7.93	7.93	7.98	7.98	7.98	7.98	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	☆	★		★	★				★				
70	☆	★		★	★								
75	☆			★	★								
80	☆			★	★								

A/F55mm & Smaller - Cold Finish A/F70mm & Larger - Hot Finish

Bolt/Nut/Washer Stock also available in Duplex. Details in P.10

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

High Nickel Alloy & Titanium

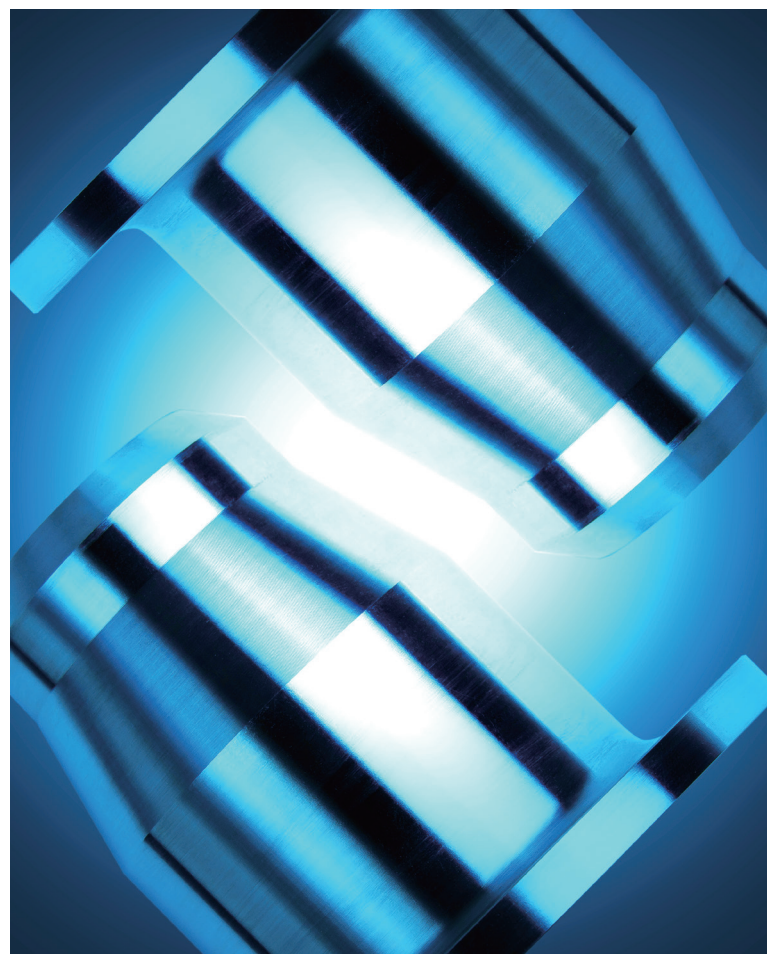
Stainless Steel

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.

High Nickel Alloy & Titanium

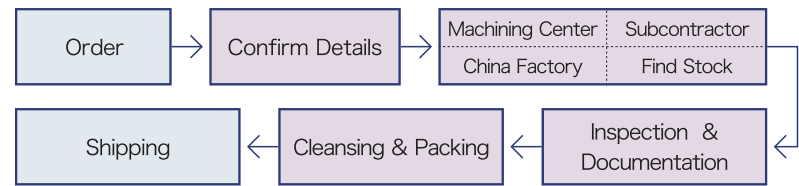
Stainless Steel

Machinings

Reference

Out Sourceable List

Production Flow



Our In-house Machining Facilities

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

ISO9001 Certified Factory



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



| High Nickel Alloy & Titanium |

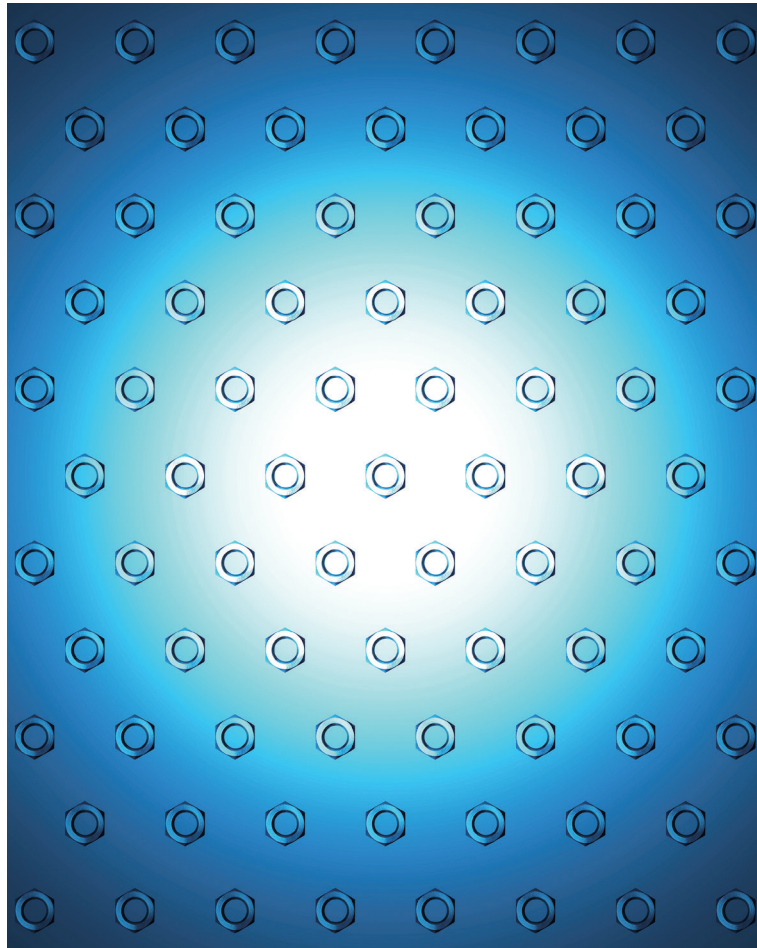
| Stainless Steel |

| Machinings |

| Reference

| Out Sourceable List |

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.

| High Nickel Alloy & Titanium |

| Stainless Steel |

| Machinings |

| Reference

| Out Sourceable List |

▶ 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) XL2-800, XL2-980S PLUS, XL3t-980S, XL5 Plus **NEW**
 Hitach High Tech(LIBS) Vulcan Expert

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

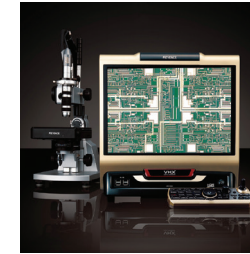
Ultrasonic Cleansing using RO filtered "PURE WATER", and Surfactant will finish the product in Super Clean Condition.



▶ 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

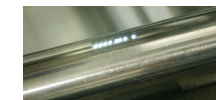


▶ Laser Marker

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 & Titanium | Stainless Steel | Machinings | Reference | Out Sourceable List

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.

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.

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 Wtungsten, and has outstanding resistance to a wide range of corrosion in both reductive and oxidative environments.

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.

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.

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.

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 ASME SB865 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.

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 825
 UNS N08825
 Specification ▶ ASTM B425 ASME SB425 NACE MR0175 NACE MR0103
 Density ▶ 8.14

Has good resistance to stress-corrosion cracking, pitting and crevice corrosion, and oxidizing and non-oxidizing hot acids.

Major Chemical Composition (%)	Ni	Cr	Mo	Cu	Fe
	42.0	21.5	3.0	2.2	30.0
	etc Ti 0.9				

Typical Mechanical Property (RT)	Tensile Strength (MPa)	0.2% Yield Strength (MPa)	Elongation (%)	Hardness (HB)
An	647	333	33	160

Alloy 600
 UNS N06600
 Specification ▶ ASTM B166 ASME SB166 AMS 5665 NACE MR0103
 Density ▶ 8.42

High-Ni and high Cr content alloy with outstanding oxidation resistance and corrosion resistance at high temperatures up to 1180C.

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

Has carburization resistance and sulfurization resistance, and shows outstanding properties of oxidation resistance and scale peeling resistance at high temperatures up to 1260C.

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

Shows outstanding corrosion resistance, high strength, tenacity, oxidation resistance and fatigue strength at temperatures from extremely low to as high as 980C.

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

Is an age-hardening alloy having outstanding strength against temperatures from -250C to 700 C, and can be welded at aged condition. Has outstanding oxidation resistance up to 980 C.

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

Has oxidation resistance and carburization resistance at high temperatures and outstanding corrosion resistance, and is resistant to internal oxidation. Has higher thermal strength against high temperature of 621C or higher.

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

Shows excellent oxidation resistance up to 1200°C (2190°F), high-temperature strength, and good resistant to stress corrosion cracking.

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

◆ 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.

Available Stainless Steel Stock from OSC partners in Japan

Alloy	UNS no.	Round Bar	Plate
		Min - Max	Min - Max
253MA	S30815		3 - 45
6% Super Stainless	S31254		2 - 20
SAF2205 / F51	S32205 / S31803	9.52 - 250	2 - 60
SAF2507	S32750	16 - 300	3 - 40
SUS329J1	S32900	13 - 150	
SUS329J4L	S31260	13 - 150	1 - 60
SUS304L	S30403	8 - 250	0.1 - 200
SUS304N2	S30452	9 - 210	9 - 35
SUS304Se		3 - 25	
SUS309S	S30908	4 - 150	1 - 50
SUS310S	S31008	3 - 300	0.5 - 60
SUS316F		3 - 20	
SUS317L	S31700	10 - 230	1.5 - 16
SUS321	S32100	3 - 350	1.5 - 50
SUS347	S34700	12 - 130	
SUS403	S40300	3 - 450	
SUS410	S41000	3 - 450	4 - 80
SUS410S	S41008		1.5 - 3
SUS416	S41600	2 - 150	
SUS420F	S42020	3 - 20	
SUS420J2	S42000	2.5 - 400	10 - 75
SUS430	S43000	2 - 200	0.3 - 50
SUS430F	S43020	2 - 25	
SUS431	S43100	30 - 180	
SUS440C	S44004	3 - 400	3 - 250
SUS444	S44400		4 - 12
SUS630	S17400	3 - 250	6 - 55
Ti Gr.2		10 - 300	0.5 - 50
6AL4V(Gr.5)		6 - 250	

Available Nickel Alloy Stock from OSC partners in Japan

Alloy	UNS no.	Plate	Pipe / Tube
		Min - Max	Min - Max
ALLOY C276	N10276	0.5 - 100	3.18 - 114.3
ALLOY C22	N06022	0.5 - 100	3.18 - 60.5
ALLOY 59	N06059	2 - 20	
ALLOY B2	N10665	2 - 20	
ALLOY 400	N04400	1 - 20	3.18 - 20
ALLOY 201	N02201	1 - 30	3.0 - 34
ALLOY 20	N08020	2 - 40	
ALLOY 825	N08825	2 - 20	
ALLOY 625	N06625	1 - 30	3.18 - 9
ALLOY 600	N06600	1 - 30	1.59 - 25.4
ALLOY 601	N06601	1 - 30	
ALLOY 800H / HT	N08811	2 - 30	
ALLOY 617	N06617	3 - 12	
ALLOY X	N06002	2 - 12	

High Nickel Alloy & Titanium

Stainless Steel

Machinings

Reference

Out Sourceable List

High Nickel Alloy & Titanium

Stainless Steel

Machinings

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