

AVAILABLE MANUFACTURING SCOPE

Coils and Sheets

Available manufacturing scope of Commercially pure titanium products (KS40S, KS40, KS50, KS60, JIS Class-1, JIS Class-2, ASTM G1, ASTM G2)

	Sheet width (mm)		W ≤ 550	W ≤ 850	850 < W ≤ 950	950 < W ≤ 1050	1050 < W ≤ 1250	1250 < W ≤ 1535	Surface finishing (KOBEL STEEL Standard)
	Sheet thickness (mm)								
Cold rolled commercially pure titanium	0.1 ≤ t < 0.3			← KS15-3-3-3 is also available.					BA
	0.3 ≤ t < 0.50							JIS Class-1 and ASTM Class-G1 only	No.2D-R No.2D-S No.2B BA BA-S
	0.50 ≤ t < 1.00							← 1350	
	1.00 ≤ t ≤ 3.0			Available manufacturing scope					
Hot rolled commercially pure titanium	3.0 ≤ t < 5.0								No.1
	5.0 ≤ t ≤ 6.0							← 1300	

- The maximum width of each product depends on material quality, thickness and degree of surface finish. For example, the available manufacturing scopes of high strength commercially pure titanium and titanium alloy are narrowed. Furthermore, in the case of BA finishing the effective width is 1,250mm and less. Please feel free to contact us for details.
- The standard cut length range of each sheet type is from 2,000 to 4,000mm, but under 2,000mm and over 4,000mm are also available. Please feel free to contact us for these specials cut lengths.
- The sheet thickness from 0.01 to 0.1 mm and KSTI-1.5AL, KS3-2.5, KSTI-9, KS15-3-3-3 are also available. Please feel free to contact us for these thicknesses.

Surface Finishing Details

KOBEL STEEL Standard		Process	Compliance with ASTM	Ra, μm (Reference value)
Symbol	Surface treatment			
No.1	Shot blasting, pickling	Hot rolling → Atmospheric annealing → Shot blasting → Pickling	No.1	3-5
No.2D-R	Shot blasting, pickling	Cold rolling → Atmospheric annealing → Shot blasting → Pickling	No.2D	3-5
No.2D-S	AP (Annealed and Pickled)	Cold rolling → Atmospheric annealing → Salt → Pickling	No.2D	0.4-1.2
No.2B	AP skin pass	Cold rolling → Atmospheric annealing → Salt → Pickling → Skin pass	No.2B	0.2-0.6
BA	VA (Vacuum Annealed)	Cold rolling → Vacuum annealing	BA	0.4-1.2
BA-S	VA skin pass	Cold rolling → Vacuum annealing → Skin pass	—	0.2-0.6

Applicable Standards	
KOBEL STEEL Standard	KS40S, KS40, KS50, KS60, KS70, KS85, KS100, KS120SI, KS40PDA, KS50PDA, KS50AKOT, KS60AKOT, KSG12, KSTI-1.5AL, KSTI-9, KS15-3-3-3
JIS H 4600	Class-1, Class-2, Class-3, Class-4, Class-11, Class-12, Class-14, Class-15, Class-61
ASTM B265	G1, G2, G3, G4, G7, G9, G11, G12, G33, G34,

Commercially pure titanium sheets complying with any other international standards are also optionally available upon request. Please feel free to contact us for details.

Plates

Plate thickness (mm)	Plate width (mm)										Length, (mm)
	W ≤ 1,230	1,230 < W ≤ 1,400	1,400 < W ≤ 1,500	1,500 < W ≤ 2,000	2,000 < W ≤ 2,500	2,500 < W ≤ 3,000	3,000 < W ≤ 3,500	3,500 < W ≤ 4,000	4,000 < W ≤ 4,500		
4 ≤ t < 5.5											2,500 < L < 6,000
5.5 ≤ t < 6											
6 ≤ t < 8											
8 ≤ t < 10											2,500 < L < 12,000
10 ≤ t < 16											
16 ≤ t < 25											
25 ≤ t < 50											2,500 < L < 7,000
50 ≤ t < 80											
80 ≤ t < 100											
100 ≤ t < 150											
150 ≤ t < 170											
170 ≤ t < 200											

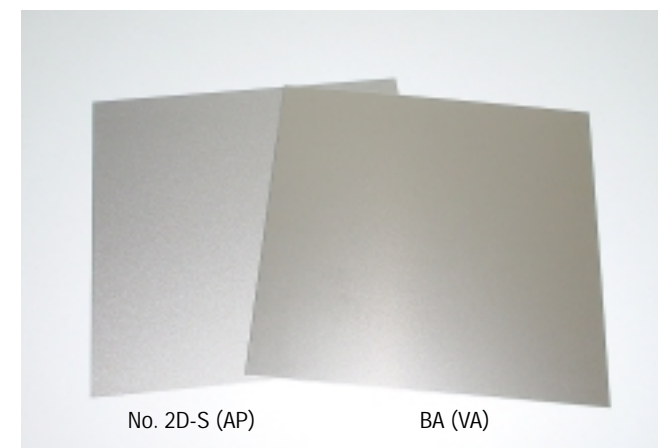
The plate surface is finished by shot blasting and pickling or polishing as standard, but finishing by other methods is also available. Please contact us for detailed information.

Applicable Standards	
KOBEL STEEL Standard	KS40S, KS40, KS50, KS60, KS70, KS85, KS100, KS120SI, KS40PDA, KS50PDA, KS50AKOT, KS60AKOT, KSG12, KS3-2.5, KS6-4, KSTI-9, KS6-6-2
JIS H 4600	Class-1, Class-2, Class-3, Class-4, Class-11, Class-12, Class-14, Class-15, Class-60, Class-61
ASTM B265	G1, G2, G3, G5, G4, G7, G9, G11, G12, G33, G34
AMS	4911, 4918, 4919

Commercially pure titanium sheets complying with any other international standards are also optionally available upon request. Please feel free to contact us for details. Please contact us for the lengths of AMS4911 (Ti-6Al-4V), 4918 (Ti-6Al-6V-2Sn) and 4919 (Ti-6Al-2Sn-4Zr-2Mo). The maximum length at 1000W is as follows.

25 ≤ t < 50	12,000mm
50 ≤ t < 100	10,000mm
100 ≤ t < 150	6,000mm
150 ≤ t < 200	4,000mm

Alloy sheet rolled products are also available. Please contact us for detailed information.



Appearance of No.2D-S (AP) and BA (VA)

AVAILABLE MANUFACTURING SCOPE

Thin Wall Welded Tubes

	Outer diameter	mm	Inch	Thickness																
				0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
	mm	Inch	0.012	0.016	0.020	0.024	0.028	0.031	0.035	0.039	0.043	0.047	0.051	0.055	0.059	0.063	0.067	0.071	0.075	0.079
			12.7	1/2																
15.9	5/8																			
19.0	3/4																			
22.2	7/8																			
25.4	1																			
28.6	1 1/8																			
31.8	1 1/4																			
34.9	1 3/8																			
38.1	1 1/2																			
42.7	-																			
48.6	-																			
50.8	2																			
54.0	2 1/8																			
60.5	-																			

The manufacturable scope differs a little depending on the material quality. Please contact us for details. Also, please contact us for other sizes and materials.

Applicable Standards		Standard welded tubes	Welded tubes of special specifications
KOBE STEEL Standard	KS40S, KS40, KS50, KS60, KS40PDA, KS50PDA, KS50AKOT, KS60AKOT, KSTI-1.5AL	■	■
JIS H4631	Class-1, Class-2, Class-11, Class-12, Class-14		■
ASTM B338	G1, G2, G7, G11, G33		
KOBE STEEL Standard	KS70, KS85, KSG12, KS3-2.5	□	■
JIS H4631	Class-3, Class-4, Class-15		■
ASTM B338	G3, G4, G9, G12, G34		

Welded Pipes

Outer diameter Nominal diameter	mm	Inch	Thickness																																			
			0.3	0.4	0.5	0.7	1.0	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	30					
6	1/8	10.5																																				
8	1/4	13.8																																				
10	3/8	17.3																																				
15	1/2	21.7																																				
20	3/4	25.4																																				
25	1	27.2																																				
40	1 1/2	38.6																																				
50	2	60.5																																				
65	2 1/2	76.3																																				
80	3	89.1																																				
90	3 1/2	101.6																																				
100	4	114.3																																				
125	5	139.8																																				
150	6	165.2																																				
200	8	216.3																																				
250	10	267.4																																				
300	12	318.5																																				
350	14	355.6																																				
400	16	406.4																																				
450	18	457.2																																				
500	20	508.0																																				
600	24	609.6																																				

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Applicable Standards	
KOBE STEEL Standard	KS40S, KS40, KS50, KS60, KS70, KS85, KS100, KS3-2.5, KS40PDA, KS50PDA, KS50AKOT, KS60AKOT, KSG12, KSTI-1.5AL
JIS H4635	Class-1, Class-2, Class-3, Class-4, Class-11, Class-12, Class-14, Class-15
ASTM B337	G1, G2, G3, G4, G7, G9, G11, G12, G33, G34

Seamless Tubes and Pipes

	Outer diameter	mm	Inch	Thickness																	
				1.0	1.2	1.4	1.6	1.8	2.0	2.3	2.6	2.9	3.2	3.5	4.0	4.5	5.0	5.5	6.0	7.0	8.0
	mm	Inch	0.039	0.047	0.055	0.063	0.071	0.079	0.091	0.102	0.114	0.126	0.138	0.157	0.177	0.197	0.217	0.236	0.276	0.315	0.354
			8																		
10																					
12																					
13.8																					
15																					
17.3																					
20																					
21.7																					
25	1																				
27.2																					
29																					
30																					
32																					
34																					
38																					
38.1	1 1/2																				
40																					
42.7																					
45																					
48.6																					
50																					
50.8	2																				
51																					
54																					
57																					
60.3	2 3/8																				
60.5																					
63.5	2 1/2																				
65																					
70																					
73																					
75																					
76.2	3																				
80																					
82.6	3 1/4																				
88.9	3 1/2																				
89.1																					
90																					
100																					
101.6	4																				
110																					
114.3	4 1/2																				

The manufacturable scope differs a little depending on the material quality. Please contact us for details. Also, please contact us for other sizes and materials.

Wires, bars

Shape	Manufacturable scope	Standard specification	Applicable Standards	
Wires	$5.5 \leq d \leq 6.5 \phi \times \text{coil}$	Hot-rolling→annealing →shaving (SV) finish	KOBE STEEL Standard	KS40S, KS40, KS50, KS60, KS70, KS85, KS100, KS120SI, KS3-2.5, KS6-4, KSTI-9, KS15-3-3-3, KS13-11-3, KS15-5-3, KS EL-F
	$6.5 \leq d \leq 13.0 \phi \times \text{coil}$	Hot rolling→Annealing →peeling (PL) finish	JIS H 4670 ASTM B348 AMS	Class-1, Class-2, Class-3, Class-4, Class-61 G1, G2, G3, G4, G5, G9 4921, 4971, 4981, 4954, 4956
Bars	$10.0 \leq d \leq 14.0 \phi \times L$	Hot rolling→annealing →Centerless grinding finish	KOBE STEEL Standard	KS40S, KS40, KS50, KS60, KS70, KS100, KS120SI, KS3-2.5, KS6-4, KSTI-9, KS6-2-4-6, KS10-2-3, KS EL-F
	$14.0 \leq d \leq 60.0 \phi \times L$	Hot rolling		